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# Petroleum Supply Monthly



December 1983 [1]

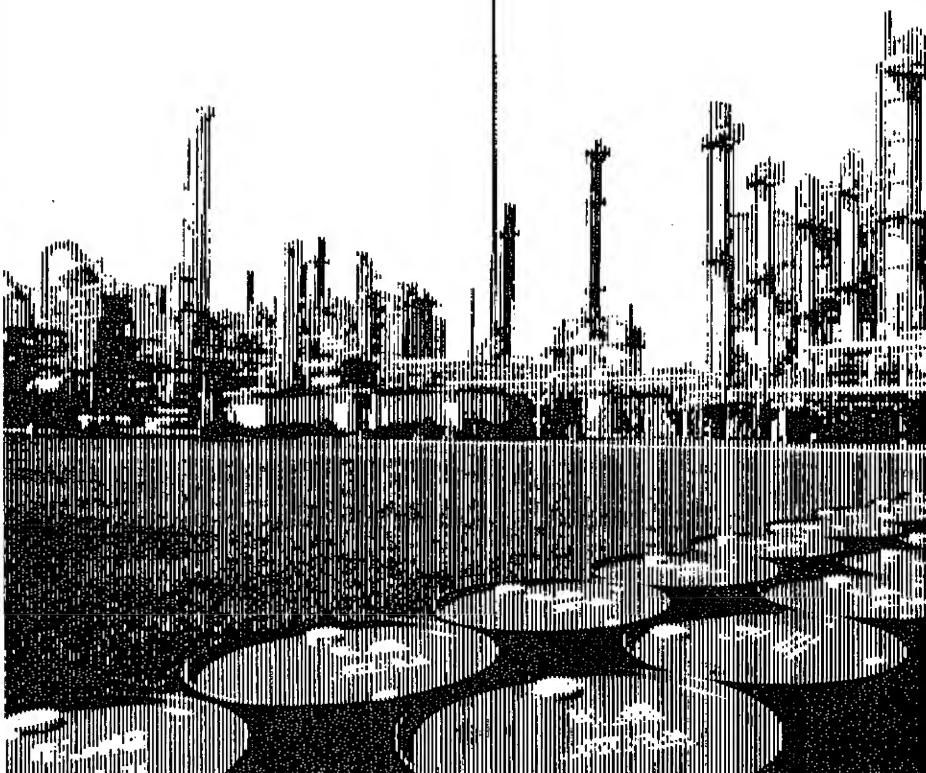
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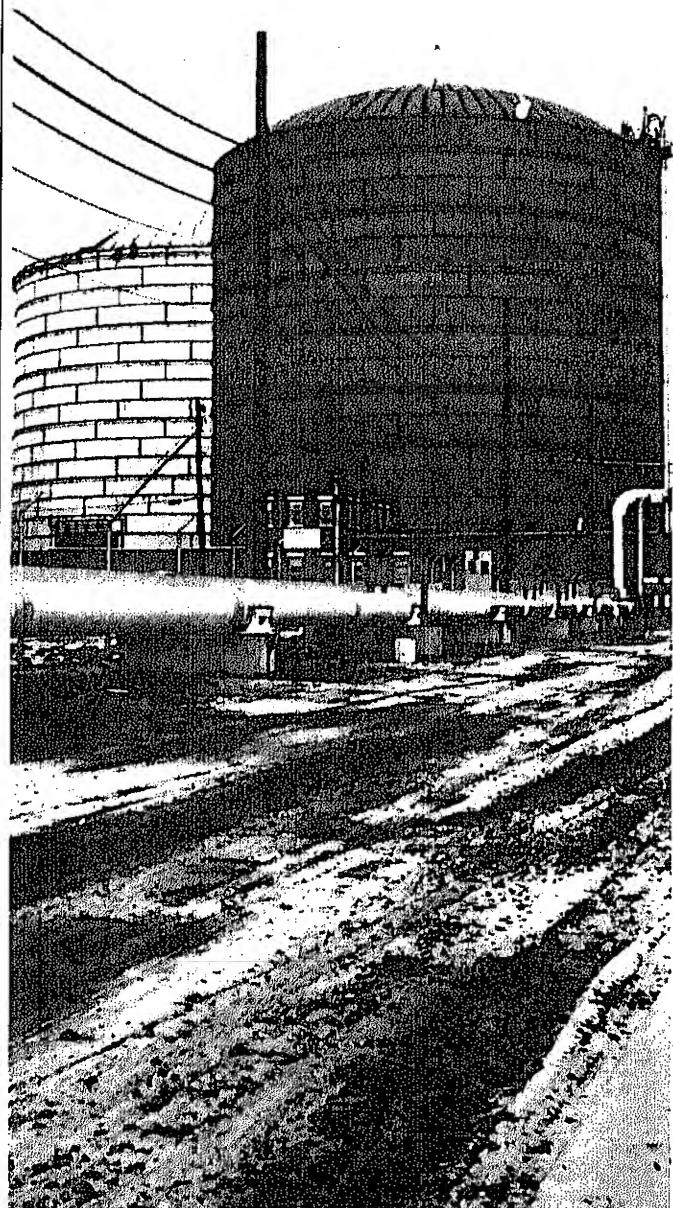




# Contents

## This Month in the PSM

This issue of the *Petroleum Supply Monthly* features a discussion of the National Petroleum Council's new estimates of minimum operating inventory levels and primary storage capacities for crude oil and selected refined petroleum products. The article, "National Petroleum Council Revises Minimum Operating Inventory Estimates," begins on page ix and compares the new estimates with previous levels. The article also summarizes major factors identified by the Council as contributing to observed changes in inventory levels.



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# Petroleum Focus





## Petroleum Supply Summary

Average Volume for Period (Million Barrels Per Day)	November			Cumulative January Through November		
	1983	1982	% Change	1983	1982	% Change
Total Product Supplied	15.3	15.0	1.9	15.0	15.3	- 1.7
Motor Gasoline	6.6	6.6	1.1	6.6	6.5	0.9
Distillate Fuel Oil	2.8	2.5	15.1	2.6	2.7	- 1.4
Residual Fuel Oil	1.3	1.6	- 18.9	1.4	1.7	- 20.0
Crude Inputs to Refineries	11.9	11.7	1.8	11.7	11.8	- 0.8
Crude Oil and Natural Gas Liquids Production	10.2	10.3	- 0.8	10.2	10.2	0.3
Net Imports <sup>1</sup>	4.5	5.0	- 9.0	4.2	4.3	- 2.5
Net Crude Oil Imports <sup>2</sup>	3.0	3.4	- 10.9	2.9	3.1	- 6.8
SPR Imports	0.1	0.2	- 42.8	0.2	0.2	36.7
Net Product Imports	1.4	1.4	0.2	1.1	1.1	4.2
Crude Oil Stock Withdrawal <sup>3</sup>	0.14	- 0.22	-	0.01	0.02	-
Product Stock Withdrawal	- 0.21	- 0.36	-	0.06	0.25	-
Stocks at End of Period (Million Barrels)						
Crude Oil <sup>2</sup>	349	358	NM			
Motor Gasoline <sup>3</sup>	231	230	NM			
Distillate Fuel Oil	162	186	NM			
Residual Fuel Oil	51	66	NM			
Total Product	777	808	NM			
SPR	371	290	28.0			
Total	1,497	1,455	NM			

<sup>1</sup>Gross imports of crude oil including Strategic Petroleum Reserve (SPR) and petroleum products less exports of crude oil and petroleum products.

<sup>2</sup>Excluding SPR.

<sup>3</sup>Including blending components.

NM = Not meaningful due to new stock basis.

Note: Percent changes are based on unrounded values. November 1983 data are estimates based on weekly data, except for export and Natural Gas Liquids Production estimates which are October 1983 monthly values. Totals may not be equal to sum of components due to independent rounding.

Source: Energy Information Administration, *Petroleum Supply Monthly*, December 1983.



# National Petroleum Council Revises Minimum Operating Inventory Estimates

At the request of the Secretary of Energy, the National Petroleum Council (NPC) has developed revised estimates of minimum operating inventories and storage capacities for crude oil and selected refined petroleum products.<sup>1</sup> This article presents these newest estimates, compares them with previous levels, and summarizes the major factors identified by the NPC as contributing to observed changes in total inventory levels.

The NPC presented its findings last month in *Petroleum Inventories and Storage Capacity—An Interim Report*. This report focuses on inventories maintained within the primary petroleum distribution system, i.e., at refineries and bulk terminals, and in pipelines. Copies of the report are available from the NPC.<sup>2</sup> A final report, extending the analysis to the secondary (or local) distribution system and the tertiary (or consumer) segment of the market, is scheduled for release in the spring of 1984.

## Minimum Operating Inventories

The minimum operating inventory (MOI) is defined as the inventory level below which operating problems and shortages would begin to appear in a defined distribution system. In presenting its revised MOI estimates, the NPC stresses that the MOI is a concept rather than a precisely measurable quantity. This limitation aside, the NPC analysis indicates that MOI's associated with the primary distribution system have declined from levels estimated in a 1979 NPC report.<sup>3</sup> This decline parallels the decline in total primary inventories reported to the Energy Information Administration over this period. MOI estimates from the 1979 and 1983 studies are compared in Table 1.

**Table 1. Minimum Operating Inventory Estimates (Million Barrels)**

	1979		1983	
	Total U.S.	PAD District I-IV	PAD District V	Total U.S.
Crude Oil <sup>a</sup>	290	215	b70	285
Motor Gasoline	210	176	24	200
Kerosene	c35	5	(s)	5
Kero-Jet Fuel	20	5	25	
Distillate Fuel Oil	125	97	8	105
Residual Fuel Oil	60	34	6	40
Total Crude Oil and Products Surveyed	720	547	113	660

<sup>a</sup>Crude oil stored in the Strategic Petroleum Reserve is not counted in the MOI.

<sup>b</sup>All Alaskan crude oil in transit by water is included in PAD District V.

<sup>c</sup>Kerosene and Kero-Jet Fuel were combined in the 1979 NPC report.

<sup>(s)</sup>Less than 0.5 million barrels.

Source: National Petroleum Council.

The NPC study was directed by the NPC Committee on Petroleum Inventories and Storage Capacity. MOI estimates for the study were developed through a decision-making process that relied on the judgment of Committee members based on their operating experience, on historical inventory trends, and on the results of an NPC survey of companies that also provide primary inventory data to the Energy Information Administration. The NPC survey requested company-wide information on total inventories, minimum operating inventories, active and idle storage capacity, and maximum operating inventories. Survey results, aggregated by Petroleum Administration for Defense (PAD) Districts are presented in an appendix to the report.

The NPC identified structural changes in the distribution system caused by the shutdown of some refinery, pipeline, and tankage capacity as the most important reason for the decline in MOI's. These structural changes represent a response to declining petroleum demand, fostered in turn by a decrease in general economic growth, a significant increase in the price of petroleum, and consumer conservation and fuel switching. The MOI, however, is a dynamic rather than static concept, and MOI estimates will continue to change over time in response to factors affecting the industry.

## Total Primary Inventories

The NPC also identified several reasons for the decline in total petroleum inventories since its 1979 study. First, the NPC identified lower product demand as the major reason for the reduction in stocks over this period. Declining demand was induced by higher prices and conservation. Second, the NPC noted that, with declining U.S. petroleum imports, concern about the short-term security of world crude oil supplies has eased, and the need for precautionary stocks held above the MOI has diminished. Third, higher petroleum prices and interest rates increased the real costs<sup>4</sup> of storing product, providing further incentive for firms to lower their inventory levels. For example, gasoline storage costs increased from an average of 10 cents per gallon per year in 1978 to 21 cents per gallon per year in 1982. Finally, downward price expectations in the spring of 1983 may have motivated some short-term stock drawdown.

<sup>1</sup>The National Petroleum Council serves as an advisory committee to the Secretary of Energy for the study of specific issues. The Council is subject to the provisions of the Federal Advisory Committee Act of 1972.

<sup>2</sup>National Petroleum Council, *Petroleum Storage and Transportation Capacities*, Volume II, *Inventory and Storage*, Washington, D.C., 1979.

<sup>3</sup>The National Petroleum Council estimated storage costs as the sum of the fee for commercial storage space and the economic cost of holding product—estimated, in turn, as the short-term interest rate times the wholesale price of the product.

<sup>4</sup>To order, write to the National Petroleum Council, 1625 K St., N.W. Washington, D.C. 20006.

Table 2 presents inventory levels evaluated in the 1979 and 1983 NPC reports. These data represent stocks on hand for the fall and spring to indicate the seasonality of product storage.

**Table 2. U.S. Inventory of Crude Oil and Selected Refined Products (Million Barrels)**

	March 31, 1978	March 31, 1983 <sup>a</sup>
Crude Oil <sup>b</sup>	345.5	358.2
Motor Gasoline	259.6	223.9
Kerosene	11.9	8.9
Kero-Jet Fuel	26.2	34.9
Distillate Fuel Oil	137.8	118.7
Residual Fuel Oil	62.4	46.3
<b>Total Crude Oil and Products Surveyed</b>	<b>843.3</b>	<b>790.9</b>
	Sept. 30, 1978	Sept. 30, 1982
Crude Oil <sup>b</sup>	321.2	340.7
Motor Gasoline	216.5	233.6
Kerosene	16.1	9.8
Kero-Jet Fuel	29.3	33.3
Distillate Fuel Oil	220.7	161.2
Residual Fuel Oil	81.3	61.7
<b>Total Crude Oil and Products Surveyed</b>	<b>885.1</b>	<b>840.5</b>

<sup>a</sup>Includes resubmissions to the Energy Information Administration as of August 10, 1983.

<sup>b</sup>Excludes Strategic Petroleum Reserve storage.

Note: Totals may not equal sum of components due to independent rounding.

Source: Data reported to the Energy Information Administration on Forms EIA-810-813 in 1983, Forms EIA-87-90 in 1982, and Forms FEA-P320-P323 in 1978.

Although the NPC survey results were not adequate to quantify the amount by which current inventory levels are influenced by the presence of spare crude oil distillation capacity in the Nation's refineries, the Committee expressed its belief that this spare capacity is a factor in the observed decrease in inventory levels. For example, it was noted that month-to-month variations in distillate and residual fuel oil stocks are exhibiting less seasonality than in past years. The growth of the Strategic Petroleum Reserve and the development of petroleum futures markets, however, are not believed to be influencing primary inventory decisions.

### Primary Storage Capacity

The NPC survey was designed to collect information on the operating limits of the primary distribution system. An upper limit on storage—the maximum quantity that

can be stored without disrupting operation of the distribution system—is referred to as the maximum operating inventory. But, because the limits of the distribution system have not been tested on an industry-wide basis, the Committee did not estimate current maximum operating inventory levels. NPC data on tank capacity, however, is useful for indicating recent trends in storage capabilities. Summary data on active tankage from the 1979 and 1983 NPC surveys are presented in Table 3.

**Table 3. Shell Capacity of Active Tankage (Million Barrels)**

	March 31, 1978	March 31, 1983
Crude Oil <sup>a</sup>	<sup>b</sup> 462	504
Gasoline	464	458
Kerosene	<sup>c</sup> 86	21
Kero-Jet Fuel		68
Distillate Fuel Oil	336	297
Residual Fuel Oil	156	144
<b>Total Crude Oil and Products Surveyed</b>	<b>1,504</b>	<b>1,492</b>

<sup>a</sup>Excludes Strategic Petroleum Reserve storage.

<sup>b</sup>Data for September 30, 1978.

<sup>c</sup>Kerosene and Kero-Jet Fuel were combined in the 1979 NPC report.

Source: National Petroleum Council.

Tankage in operation reported for 1983 is below the 1978 level. Three primary reasons for this decline were noted:

- A reduction in crude oil and product demand caused refinery and terminal shutdowns and tankage consolidation.
- Tankage that was not retrofitted to meet environmental regulations was removed from service.
- Physical deterioration of tankage occurred.

The growth in crude oil storage capacity represents the activation of the Louisiana Offshore Oil Port and the net addition of tankage at refineries and terminals. Concerns about the security of supply in 1979 and 1980 may have prompted construction of crude oil tankage or conversion of product storage to crude oil storage.

Total tank utilization in 1983 was only 40 percent, compared with a 35-year average of 46 percent. The Committee reported that additional storage deactivation is expected in the near future, which would tend to return the percentage utilization figure closer to the historical average.

## Conclusions

Minimum operating inventory estimates prepared periodically by the National Petroleum Council are of great value in assessing the adequacy of total inventories to accommodate a disruption of petroleum supplies or surges in demand (related, for example, to severe weather). To place current inventory statistics in perspective, the Energy Information Administration has presented the Council's 1979 MOI estimates in its *Weekly Petroleum Status Report* (WPSR) for the last 3 years. Beginning with the November 17, 1983 issue, the WPSR presents the Council's latest MOI estimates.

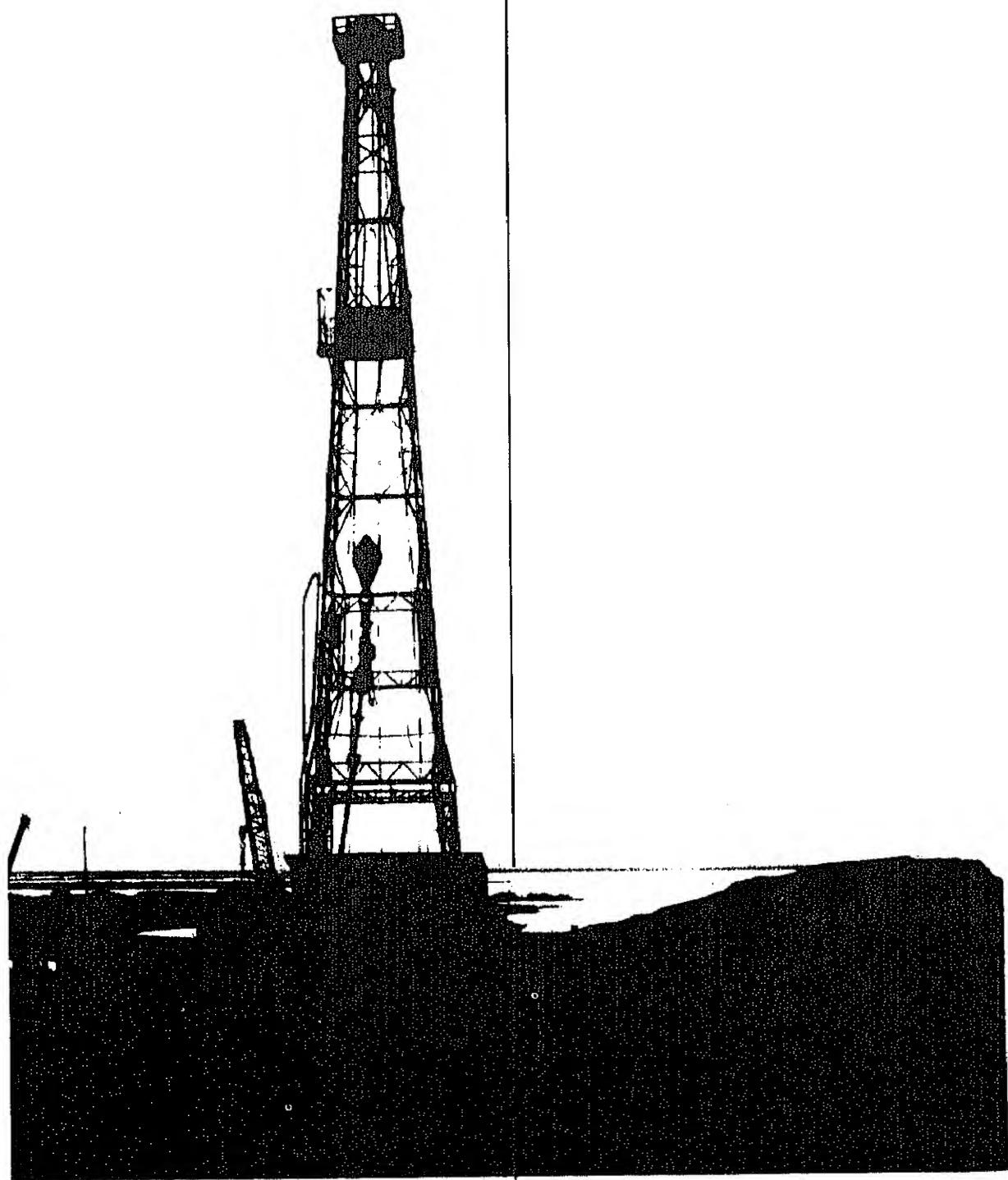
As the NPC report notes, the MOI is not a static figure—it changes with those factors influencing the industry structure. Thus, primary inventories for distillate

and residual fuel oils have recently fallen substantially below the MOI's established for those fuels in the 1979 NPC inventory study, with no occurrence of distribution problems. That these MOI figures were clearly out of date prompted, in part, the Secretary of Energy's request for revised estimates. Industry conditions influencing MOI's, however, are still in a state of flux. Residual fuel oil MOI's, in particular, continue to respond to decreased economic activity, fuel switching, and changing import levels. Accordingly, increasing care should be exercised over time in utilizing the 1983 MOI estimates presented in this article.

The new NPC inventory study contains additional valuable information on how the revised MOI estimates were derived and on how current inventory data can best be interpreted in light of these new estimates.



## **Summary Statistics**



## Crude Oil<sup>1</sup> and Petroleum Products Overview

	Field Production			Stock Withdrawal <sup>2</sup>		Petroleum Products Supplied	Ending Stocks <sup>3</sup>	
	Total Domestic <sup>4</sup>	Crude Oil	Natural Gas Plant Production	Crude Oil <sup>5</sup>	Petroleum Products			
	Thousand Barrels per Day						Million Barrels	
1973	AVERAGE	10,975	9,208	1,738	11	-146	17,308	1,008
1974	AVERAGE	10,498	8,774	1,688	-62	-117	16,653	<sup>6</sup> 1,074
1975	AVERAGE	10,045	8,375	1,633	-17	-145	16,322	1,133
1976	AVERAGE	9,774	8,132	1,603	-39	96	17,461	1,112
1977	AVERAGE	9,913	8,245	1,618	-170	-378	18,431	1,312
1978	AVERAGE	10,328	8,707	1,567	-78	172	18,847	1,278
1979	AVERAGE	10,179	8,552	1,584	-148	-25	18,513	1,341
1980	AVERAGE	10,214	8,597	1,573	-98	-42	17,056	<sup>6</sup> 1,392
1981	January	10,231	8,540	1,652	50	1,159	18,430	1,388
	February	10,294	8,604	1,653	-278	250	16,989	1,389
	March	10,272	8,613	1,624	-632	224	15,907	1,401
	April	10,195	8,557	1,599	-595	148	15,350	1,415
	May	10,160	8,501	1,593	-391	-374	15,353	1,438
	June	10,287	8,629	1,594	-135	406	16,095	1,430
	July	10,098	8,500	1,548	-360	91	15,682	1,439
	August	10,243	8,583	1,614	397	-999	15,263	1,457
	September	10,281	8,604	1,612	-285	-341	15,655	1,476
	October	10,225	8,563	1,598	-760	477	15,822	1,485
	November	10,269	8,586	1,630	-325	-233	15,593	1,501
	December	10,220	8,585	1,590	-170	745	16,596	1,484
	AVERAGE	10,230	8,572	1,609	-290	130	16,058	
1982	January	10,128	8,509	1,578	-401	1,298	16,124	1,456
	February	10,312	8,702	1,563	-242	1,230	16,001	1,428
	March	10,284	8,667	1,572	121	1,047	15,560	1,392
	April	10,188	8,591	1,542	-37	1,583	16,046	1,346
	May	10,244	8,683	1,518	29	-66	14,847	1,347
	June	10,212	8,646	1,511	40	-489	14,998	1,360
	July	10,229	8,658	1,513	-147	-926	14,821	1,393
	August	10,215	8,634	1,524	-440	-44	14,839	1,408
	September	10,279	8,701	1,518	263	-447	15,022	1,414
	October	10,299	8,701	1,530	-548	-47	14,859	1,432
	November	10,359	8,697	1,609	-398	-361	15,009	1,455
	December	10,276	8,598	1,628	128	688	15,487	<sup>6</sup> 1,430
	AVERAGE	10,252	8,649	1,550	-136	283	15,296	
1983	January	10,356	8,634	1,668	-567	865	14,765	1,453
	February	10,298	8,660	1,585	-382	1,128	14,772	1,432
	March	10,259	8,677	1,544	56	1,765	15,484	1,375
	April	10,229	8,686	1,502	-438	431	14,779	1,376
	May	10,231	8,682	1,483	68	-759	14,250	1,397
	June	10,262	8,676	1,514	-163	-242	15,281	1,409
	July	10,237	8,647	1,536	118	-922	14,913	1,434
	August	10,257	8,653	1,561	-781	-289	15,366	1,467
	September	10,323	8,666	1,598	-191	-634	15,396	1,492
	October*	10,317	8,664	1,604	R -180	R -456	R 14,947	R 1,512
	November**	NA	8,624	NA	8	-209	15,289	1,497
	AVERAGE	NA	8,660	NA	-222	55	15,022	

<sup>1</sup> Includes lease condensate.

<sup>2</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>3</sup> Stocks are totals as of end of period.

<sup>4</sup> Includes crude oil, natural gas plant production, other hydrocarbons and alcohol.

<sup>5</sup> Includes stocks located in the Strategic Petroleum Reserve.

<sup>6</sup> In January 1975, 1981, and 1983, significant numbers of new respondents were added to bulk terminal and pipeline surveys as a result of extensive investigation during the previous years.

The major impact is on the reporting of stocks and stock withdrawals. Using the expanded coverage (new basis), end of year stocks would be: 1974-1,121, 1980-1,420 and 1982-1,462.

Stock withdrawals during 1975, 1981 and 1983 are calculated using new basis stock levels. Totals may not equal sum of components due to independent rounding.

NA = Not available. R = Revised data.

\* See Explanatory Note 9.1.

\*\* Italics denote preliminary data. See Explanatory Note 8.

Geographic coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

**Crude Oil<sup>1</sup> and Petroleum Products Overview (continued)**

	Imports			Exports			Net <sup>3</sup> Imports
	Total	Crude Oil <sup>2</sup>	Petroleum Products	Total	Crude Oil	Petroleum Products	
	Thousand Barrels per Day						
1973 AVERAGE	6,256	3,244	3,012	231	2	229	6,025
1974 AVERAGE	6,112	3,477	2,635	221	3	218	5,892
1975 AVERAGE	6,056	4,105	1,951	209	6	204	5,846
1976 AVERAGE	7,313	5,287	2,026	223	8	215	7,090
1977 AVERAGE	8,807	6,615	2,193	243	50	193	8,565
1978 AVERAGE	8,363	6,356	2,008	362	158	204	8,002
1979 AVERAGE	8,456	6,519	1,937	472	235	237	7,984
1980 AVERAGE	6,909	5,263	1,646	544	287	258	6,365
1981 January	6,827	4,932	1,895	558	339	219	6,270
February	6,772	4,873	1,899	569	198	371	6,203
March	6,028	4,521	1,507	586	210	376	5,442
April	5,668	4,338	1,330	570	198	372	5,098
May	5,775	4,287	1,489	595	312	283	5,180
June	5,435	4,061	1,375	420	123	297	5,015
July	5,816	4,296	1,521	571	257	314	5,245
August	5,767	4,179	1,588	644	204	440	5,123
September	6,365	4,740	1,624	519	194	325	5,845
October	5,959	4,380	1,579	738	226	512	5,221
November	5,741	4,046	1,695	701	278	423	5,041
December	5,843	4,137	1,706	656	189	467	5,187
AVERAGE	5,996	4,398	1,599	595	228	367	5,401
1982 January	5,332	3,693	1,639	829	238	591	4,503
February	4,807	2,990	1,817	804	304	499	4,003
March	4,484	2,874	1,610	882	321	561	3,802
April	4,378	2,849	1,529	786	174	611	3,593
May	4,811	3,309	1,503	803	262	542	4,008
June	5,327	3,836	1,491	703	94	609	4,624
July	5,890	4,248	1,642	741	229	512	5,149
August	5,244	3,851	1,392	858	304	554	4,386
September	5,414	3,636	1,778	791	184	606	4,624
October	5,306	3,670	1,636	932	270	662	4,374
November	5,744	3,862	1,882	786	262	524	4,958
December	4,606	3,000	1,605	860	193	667	3,746
AVERAGE	5,113	3,488	1,625	815	236	579	4,298
1983 January	4,372	2,938	1,434	973	117	856	3,399
February	3,691	2,268	1,423	865	262	603	2,825
March	3,629	2,232	1,398	801	174	627	2,829
April	4,744	3,154	1,590	809	88	721	3,935
May	4,898	3,234	1,664	848	280	568	4,049
June	5,218	3,502	1,716	774	144	630	4,443
July	5,690	3,868	1,822	571	145	426	5,119
August	6,036	4,174	1,863	663	172	491	5,373
September	6,088	4,221	1,867	684	177	507	5,403
October*	R 5,256	R 3,446	R 1,810	576	140	436	4,680
November**	5,088	3,290	1,797	NA	NA	NA	NA
AVERAGE	4,981	3,309	1,673	NA	NA	NA	NA

<sup>1</sup> Includes lease condensate.

<sup>2</sup> Includes crude oil for storage in the Strategic Petroleum Reserve.

<sup>3</sup> Net Imports = Imports minus Exports.

Totals may not equal sum of components due to independent rounding.

NA = Not available. R = Revised data.

\* See Explanatory Note 9.1.

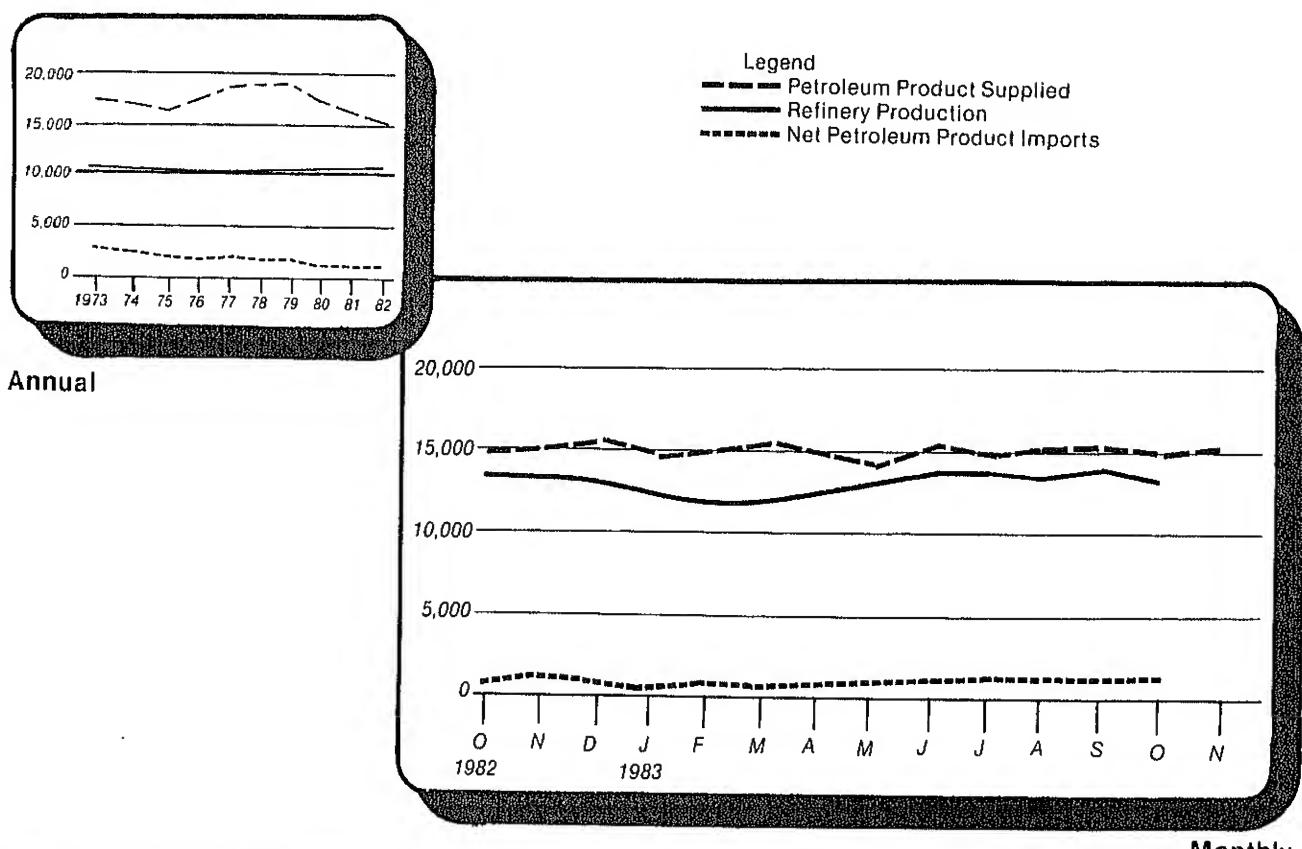
\*\* Italics denote preliminary data. See Explanatory Note 8.

Geographic coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

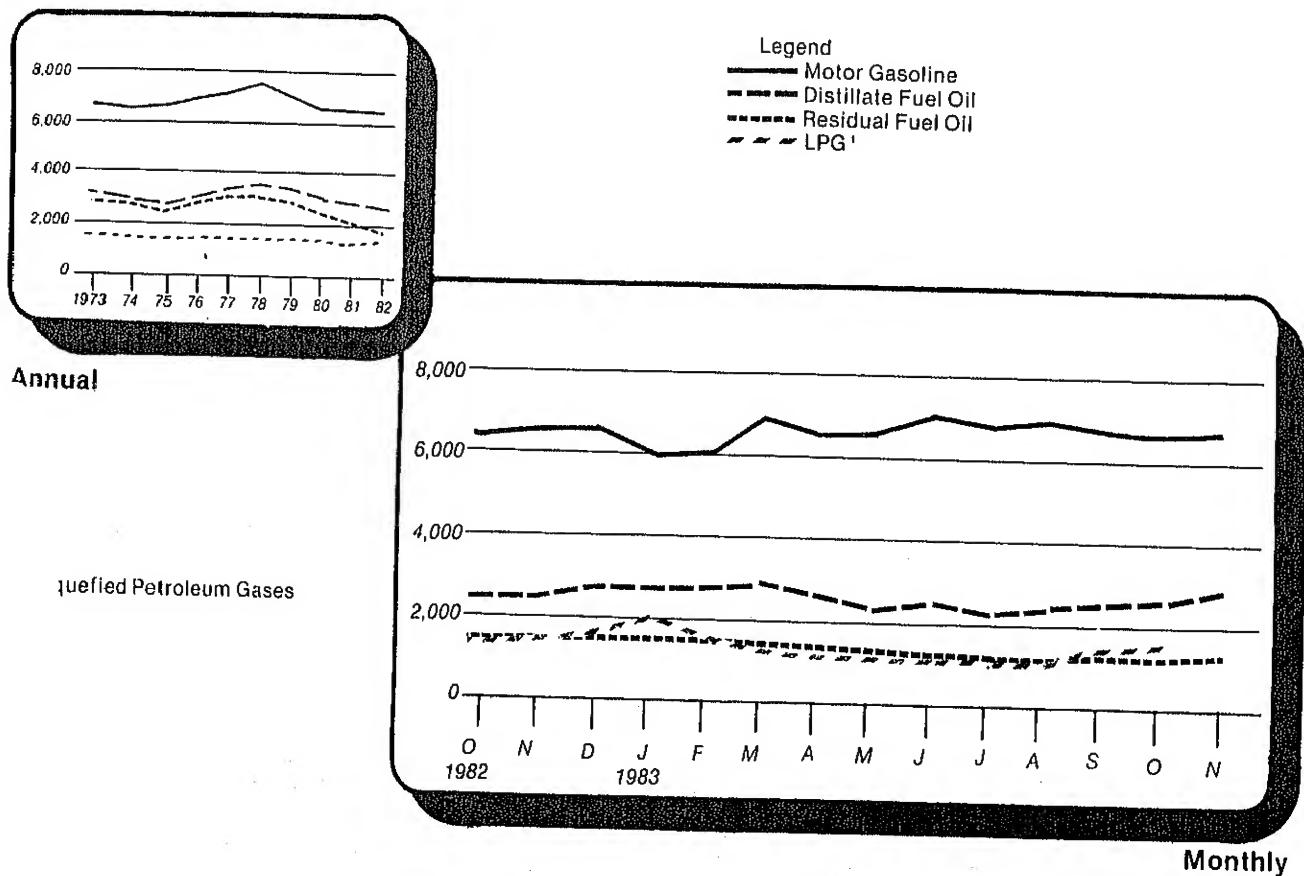
## Petroleum Overview

(Thousand Barrels Per Day)



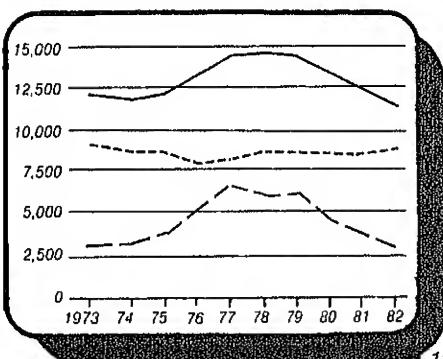
## Petroleum Products Supplied

(Thousand Barrels Per Day)



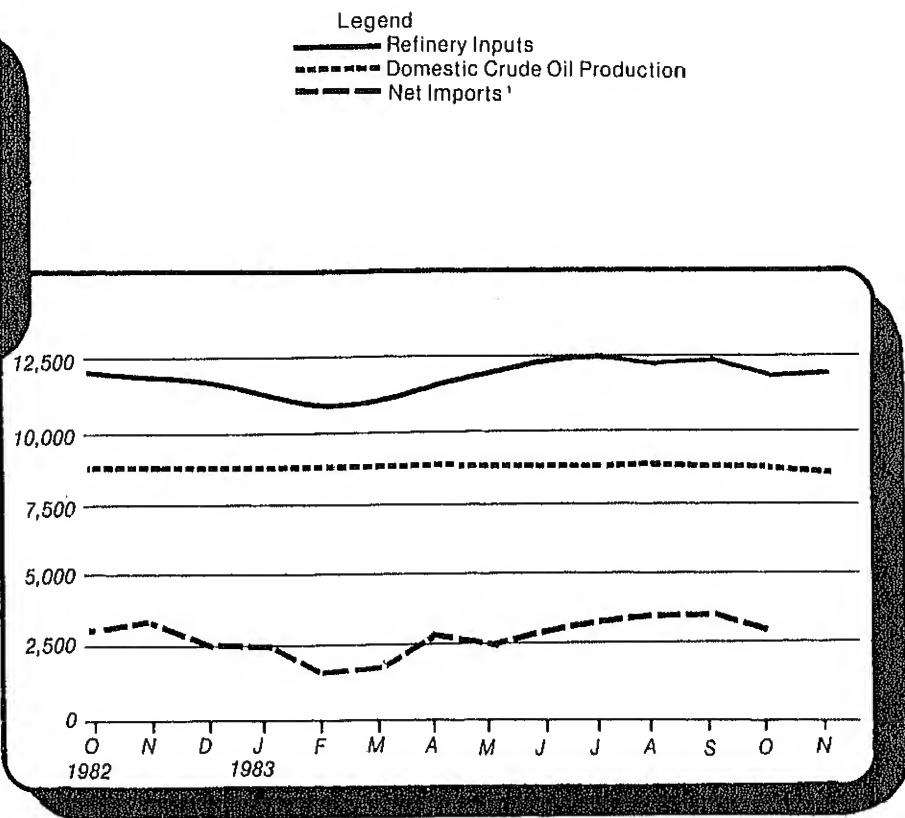
## Crude Oil Supply and Disposition

(Thousand Barrels Per Day)



Annual

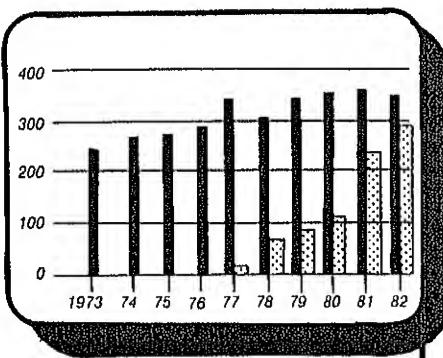
<sup>1</sup> Excludes SPR Imports



Monthly

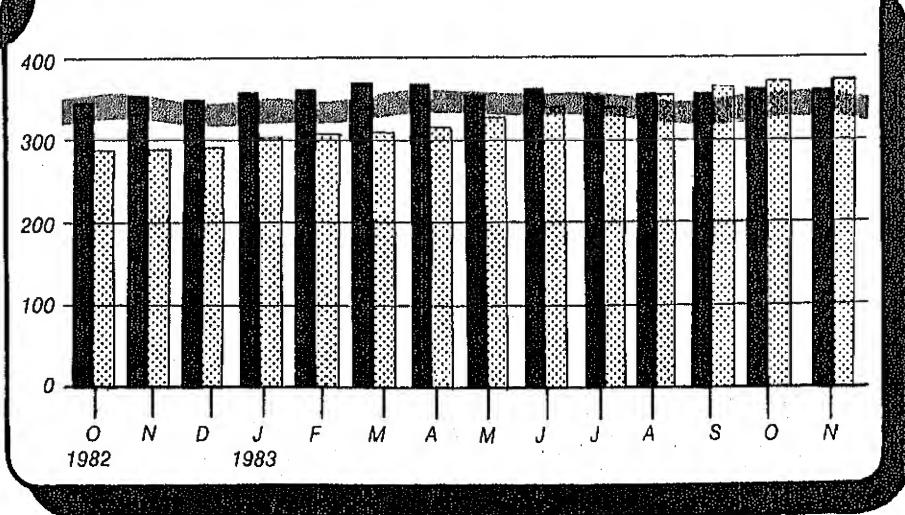
## Crude Oil Ending Stocks

(Millions of Barrels)



Annual

<sup>1</sup> Level and width of Average Stock Ranges for crude oil is based on 3 years of data, July 80-July 83. See Explanatory Note 6.



Monthly

## Crude Oil<sup>1</sup> Supply and Disposition

	Supply							
	Field Production		Imports			Stock Withdrawal <sup>2</sup>		Unac- counted for Crude Oil
	Total Domestic	Alaskan	Total	SPR <sup>3</sup>	Other	SPR <sup>3</sup>	Other	
	Thousand Barrels per Day							
1973 AVERAGE	9,208	198	3,244		3,244		11	3
1974 AVERAGE	8,774	193	3,477		3,477		-62	-25
1975 AVERAGE	8,375	191	4,105		4,105		-17	17
1976 AVERAGE	8,132	173	5,287		5,287		-39	77
1977 AVERAGE	8,245	464	6,615	21	6,594	-20	-150	-6
1978 AVERAGE	8,707	1,229	6,356	162	6,195	-163	84	-57
1979 AVERAGE	8,552	1,401	6,519	67	6,452	-67	-81	-11
1980 AVERAGE	8,597	1,617	5,263	44	5,219	-45	-52	34
1981 January	8,540	1,606	4,932	106	4,826	-151	201	113
February	8,604	1,619	4,873	80	4,793	-127	-150	-41
March	8,613	1,618	4,521	140	4,382	-155	-477	154
April	8,557	1,608	4,338	272	4,066	-444	-151	51
May	8,501	1,580	4,287	386	3,901	-513	122	286
June	8,629	1,632	4,061	318	3,743	-434	299	49
July	8,500	1,605	4,296	175	4,121	-324	-36	147
August	8,583	1,602	4,179	257	3,922	-372	769	16
September	8,604	1,607	4,740	435	4,305	-486	201	-295
October	8,563	1,596	4,380	453	3,927	-501	-259	166
November	8,586	1,614	4,046	271	3,774	-259	-66	279
December	8,585	1,623	4,137	165	3,971	-252	82	52
AVERAGE	8,572	1,609	4,396	256	4,141	-336	46	83
1982 January	8,509	1,705	3,693	170	3,523	-159	-242	101
February	8,702	1,707	2,990	159	2,830	-213	-29	156
March	8,667	1,696	2,874	185	2,689	-235	357	2
April	8,591	1,691	2,849	190	2,659	-233	196	231
May	8,683	1,707	3,309	204	3,105	-176	205	111
June	8,648	1,665	3,836	105	3,792	-105	144	133
July	8,658	1,710	4,248	97	4,150	-97	-50	-20
August	8,634	1,697	3,851	208	3,643	-208	-232	189
September	8,701	1,705	3,636	139	3,497	-143	406	-210
October	8,701	1,706	3,670	216	3,454	-216	-332	249
November	8,697	1,676	3,862	180	3,683	-179	-219	-124
December	8,598	1,682	3,000	124	2,877	-125	252	35
AVERAGE	8,649	1,696	3,488	165	3,323	-174	38	71
1983 January	8,634	1,698	2,938	219	2,720	-219	-348	238
February	8,660	1,725	2,268	197	2,071	-197	-185	423
March	8,677	1,726	2,232	201	2,031	-184	240	134
April	8,686	1,710	3,154	205	2,949	-197	-241	191
May	8,682	1,710	3,234	289	2,945	-293	362	148
June	8,676	1,710	3,502	190	3,312	-188	25	480
July	8,647	1,705	3,868	274	3,594	-264	382	-74
August	8,653	1,712	4,174	350	3,823	-358	-423	333
September	8,666	1,722	4,221	309	3,912	-307	116	-6
October*	8,654	1,731	R 3,446	R 202	R 3,244	R -201	R 21	69
November**	8,624	1,713	3,290	103	3,187	-127	135	NA
AVERAGE	8,660	1,715	3,309	231	3,077	-231	9	NA

<sup>1</sup> Includes lease condensate.

<sup>2</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>3</sup> Strategic Petroleum Reserve.

Totals may not equal sum of components due to independent rounding.

NA = Not available. R = Revised data.

\* See Explanatory Note 9.2.

\*\* Italics denote preliminary data. See Explanatory Note 8.

Note: Stock withdrawals during 1975, 1981, and 1983 are calculated using new basis stock levels.

Geographic coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

**Crude Oil<sup>1</sup> Supply and Disposition (continued)**

	Supply	Disposition					Ending Stocks <sup>2</sup>		
		Crude Used Directly <sup>3</sup>	Crude Losses	Refinery Inputs	Exports	Products Supplied <sup>3</sup>	Total Crude Oil	SPR <sup>4</sup>	Other Primary
		Thousand Barrels per Day					Million Barrels		
1973	AVERAGE	-19	13	12,431	2	NA	242		242
1974	AVERAGE	-15	13	12,133	3	NA	5 265		5 265
1975	AVERAGE	-17	13	12,442	6	NA	271		271
1976	AVERAGE	-18	15	13,416	8	NA	285		285
1977	AVERAGE	-14	16	14,602	50	NA	348	7	340
1978	AVERAGE	-14	16	14,739	158	NA	376	67	309
1979	AVERAGE	-13	16	14,648	235	NA	430	91	339
1980	AVERAGE	-13	15	13,481	287	NA	5 466	108	5 358
1981	January	-43	6	13,247	339	NA	486	112	374
	February	-55	3	12,902	198	NA	494	116	378
	March	-57	6	12,383	210	NA	514	121	393
	April	-59	3	12,091	198	NA	532	134	397
	May	-59	3	12,309	312	NA	544	150	394
	June	-58	7	12,415	123	NA	548	163	385
	July	-58	7	12,261	257	NA	559	173	386
	August	-58	5	12,908	204	NA	547	185	362
	September	-61	4	12,505	194	NA	555	199	356
	October	-63	3	12,057	226	NA	579	215	364
	November	-64	4	12,240	278	NA	589	223	366
	December	-63	4	12,349	189	NA	594	230	363
	AVERAGE	-58	5	12,470	228	NA			
1982	January	-63	3	11,599	238	NA	606	235	371
	February	-64	2	11,236	304	NA	613	241	372
	March	-63	5	11,276	321	NA	609	249	361
	April	-65	3	11,392	174	NA	610	256	355
	May	-62	3	11,806	262	NA	609	261	348
	June	-60	7	12,494	94	NA	608	264	344
	July	-60	3	12,446	229	NA	613	267	346
	August	-57	2	11,871	304	NA	626	274	353
	September	-56	4	12,146	184	NA	619	278	341
	October	-51	2	11,749	270	NA	636	285	351
	November	-51	1	11,724	262	NA	648	290	358
	December	-53	1	11,514	193	NA	5 644	294	5 350
	AVERAGE	-59	3	11,774	236	NA			
1983	January	NA	2	11,070	117	54	661	301	361
	February	NA	3	10,635	262	69	672	306	366
	March	NA	2	10,854	174	70	670	312	359
	April	NA	2	11,436	88	68	684	318	366
	May	NA	1	11,789	280	63	681	327	355
	June	NA	1	12,287	144	64	686	332	354
	July	NA	2	12,347	145	65	683	341	342
	August	NA	1	12,141	172	64	707	352	355
	September	NA	1	12,445	177	66	713	361	352
	October*	NA	1	R 11,784	140	63	R 718	R 367	R 351
	November**	NA	NA	11,939	NA	NA	720	371	349
	AVERAGE	NA	NA	11,708	NA	NA			

<sup>1</sup> Includes lease condensate.

<sup>2</sup> Stocks are totals as of end of period.

<sup>3</sup> Beginning in January 1983, crude oil used directly as fuel is presented as product supplied for crude oil. Prior to January 1983 crude oil used directly was included with crude oil losses in this table and with product supplied for distillate and residual fuel oils.

<sup>4</sup> Strategic Petroleum Reserve.

<sup>5</sup> In January 1975, 1981, and 1983, significant numbers of new respondents were added to bulk terminal and pipeline surveys as a result of extensive investigation during the previous years.

The major impact is on the reporting of stocks and stock withdrawals. Using the expanded coverage (new basis) end of year stocks would be: 1974-265, 1980-483 (Total) and 375 (Other Primary), and 1982-644 (Total) and 350 (Other Primary).

Totals may not equal sum of components due to independent rounding.

NA = Not available. R = Revised data.

\* See Explanatory Note 9.2.

\*\* Italics denote preliminary data. See Explanatory Note 8.

Geographic coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

## Crude Oil and Petroleum Product Imports

		Imports from OPEC Sources <sup>1</sup>										
		Algeria	Libya	Saudi Arabia	United Arab Emirates	Indonesia	Iran	Nigeria	Venezuela	Other OPEC <sup>2</sup>	Total OPEC	Total Arab OPEC <sup>3</sup>
		Thousand Barrels per Day										
1973	AVERAGE	136	164	486	71	213	223	459	1,135	106	2,993	915
1974	AVERAGE	190	4	461	74	300	469	713	979	88	3,280	752
1975	AVERAGE	282	232	715	117	390	280	762	702	122	3,601	1,383
1976	AVERAGE	432	453	1,230	254	539	298	1,025	700	134	5,066	2,424
1977	AVERAGE	559	723	1,380	335	541	535	1,143	690	287	6,193	3,185
1978	AVERAGE	649	654	1,144	385	573	555	919	645	226	5,751	2,963
1979	AVERAGE	636	658	1,356	281	420	304	1,080	690	212	5,637	3,056
1980	AVERAGE	488	554	1,261	172	348	9	857	481	130	4,300	2,551
1981	January	341	500	1,284	93	424	0	908	549	27	4,127	2,219
	February	381	468	1,122	93	406	0	866	463	92	3,891	2,064
	March	352	485	1,027	47	328	0	771	360	54	3,425	1,912
	April	263	485	1,034	68	307	0	812	237	39	3,245	1,867
	May	393	443	933	17	297	0	664	331	124	3,203	1,796
	June	356	380	865	60	367	0	528	248	118	2,922	1,703
	July	333	251	1,073	80	340	0	651	466	38	3,233	1,757
	August	348	274	1,082	61	377	0	321	523	84	3,070	1,765
	September	336	154	1,477	96	371	0	323	359	149	3,264	2,063
	October	242	147	1,342	90	427	0	412	389	172	3,220	1,820
	November	210	132	1,270	112	353	0	517	535	56	3,184	1,724
	December	176	122	1,045	158	400	0	684	411	132	3,129	1,502
	AVERAGE	311	319	1,129	81	366	0	620	406	90	3,323	1,848
1982	January	254	161	877	111	289	0	663	376	128	2,859	1,403
	February	139	92	693	89	244	0	584	355	102	2,297	1,054
	March	91	37	555	155	200	0	522	399	91	2,051	860
	April	85	0	511	122	215	0	427	426	85	1,871	740
	May	179	0	601	116	236	0	222	422	54	1,830	897
	June	115	0	593	94	215	72	537	361	110	2,096	820
	July	159	0	660	108	327	69	910	356	95	2,685	965
	August	181	0	489	133	271	27	574	299	133	2,107	818
	September	179	0	432	57	191	21	477	518	69	1,943	677
	October	249	7	494	61	242	108	313	504	108	2,084	810
	November	247	14	489	47	283	34	479	528	115	2,235	797
	December	155	0	237	12	265	88	462	399	73	1,690	421
	AVERAGE	170	26	552	92	248	35	514	412	97	2,146	854
1983	January	204	0	282	47	255	43	186	324	43	1,384	533
	February	104	0	214	9	217	0	92	371	28	1,035	326
	March	63	0	103	0	138	0	121	425	173	1,023	183
	April	228	0	180	(s)	210	0	186	508	125	1,438	409
	May	284	0	122	12	324	37	352	444	69	1,645	419
	June	300	0	175	40	502	38	402	335	146	1,938	515
	July	282	0	182	58	464	112	525	431	187	2,240	599
	August	370	0	426	45	416	213	464	477	230	2,641	866
	September	413	0	587	21	516	86	324	472	208	2,627	1,074
	October	261	0	638	16	368	12	307	337	169	2,108	938
	AVERAGE	252	0	291	25	341	55	298	413	139	1,814	588

<sup>1</sup> Excludes petroleum imported into the United States indirectly from OPEC countries, primarily from Caribbean and West European areas, as refined petroleum products which were refined from crude oil produced in OPEC countries.

<sup>2</sup> Includes Ecuador, Gabon, Iraq, Kuwait, and Qatar.

<sup>3</sup> Includes Algeria, Libya, Saudi Arabia, United Arab Emirates, Iraq, Kuwait, and Qatar.

(s) Less than 500 barrels.

Footnotes continued on following page.

**Crude Oil and Petroleum Product Imports (continued)**

	Imports from NON-OPEC Sources <sup>4</sup>										
	Bahamas	Canada	Mexico	Netherlands Antilles	Trinidad and Tobago	United Kingdom	Puerto Rico	Virgin Islands	Other NON OPEC	Total NON OPEC	Total Imports
	Thousand Barrels per Day										
1973 AVERAGE	174	1,325	16	585	255	15	99	329	465	3,263	6,256
1974 AVERAGE	164	1,070	8	511	251	8	90	391	340	2,832	6,112
1975 AVERAGE	152	846	71	332	242	14	90	406	300	2,454	6,056
1976 AVERAGE	118	599	87	275	274	31	88	422	353	2,247	7,313
1977 AVERAGE	171	517	179	211	289	126	105	466	550	2,614	8,807
1978 AVERAGE	160	467	318	229	253	180	94	429	484	2,613	8,363
1979 AVERAGE	147	538	439	231	190	202	92	431	648	2,819	8,456
1980 AVERAGE	78	455	533	225	176	176	88	388	491	2,609	6,909
1981 January	39	543	401	198	150	233	89	494	552	2,701	6,827
February	84	546	437	227	163	271	46	481	626	2,881	6,772
March	74	472	488	227	93	263	45	370	571	2,603	6,028
April	68	412	418	198	139	402	40	365	380	2,423	5,688
May	122	365	522	213	105	368	58	344	474	2,573	5,775
June	51	353	538	196	124	397	67	262	525	2,513	5,435
July	77	382	384	212	178	553	50	206	541	2,583	5,816
August	69	378	489	255	123	592	68	184	539	2,698	5,767
September	111	423	708	163	169	528	72	265	661	3,100	6,365
October	63	449	669	161	121	351	60	303	562	2,739	5,959
November	63	547	628	168	108	253	76	294	421	2,557	5,741
December	70	501	587	148	125	280	73	367	563	2,714	5,843
AVERAGE	74	447	522	197	133	375	62	327	534	2,672	5,996
1982 January	58	513	425	179	106	346	62	334	452	2,474	5,332
February	67	537	476	221	120	181	38	362	508	2,510	4,807
March	43	437	503	189	118	294	62	307	480	2,433	4,484
April	82	360	476	184	166	247	36	266	690	2,507	4,378
May	77	419	766	152	95	516	47	302	607	2,981	4,811
June	32	481	797	148	129	557	58	322	708	3,231	5,327
July	64	536	783	158	118	433	38	376	698	3,204	5,890
August	80	443	853	145	106	520	24	317	650	3,137	5,244
September	92	493	897	195	89	631	51	278	746	3,472	5,414
October	45	459	682	148	109	666	52	262	801	3,222	5,306
November	51	553	860	212	90	623	81	334	706	3,508	5,744
December	88	561	689	174	102	438	48	336	480	2,916	4,606
AVERAGE	65	482	685	175	112	456	50	316	627	2,968	5,113
1983 January	68	536	849	218	73	315	40	299	588	2,988	4,372
February	92	592	722	179	81	193	50	192	554	2,655	3,691
March	86	488	760	187	78	240	43	162	563	2,606	3,629
April	167	452	981	216	85	421	20	183	781	3,306	4,744
May	135	501	944	153	108	483	42	235	651	3,252	4,898
June	137	576	831	181	120	424	48	252	712	3,281	5,218
July	69	633	849	191	103	369	37	364	836	3,450	5,690
August	142	540	891	194	90	461	40	313	725	3,395	6,036
September	137	523	832	251	82	472	33	308	822	3,461	6,088
October	164	539	771	172	106	414	48	370	565	3,149	5,256
AVERAGE	120	537	844	194	93	381	40	269	680	3,157	4,971

(8) Less than 500 barrels.

<sup>4</sup> Includes petroleum imported into the United States indirectly from OPEC countries, primarily from Caribbean and West European areas, as refined petroleum products which were refined from crude oil produced in OPEC countries.

Note: Beginning in October 1977, Strategic Petroleum Reserve imports are included.

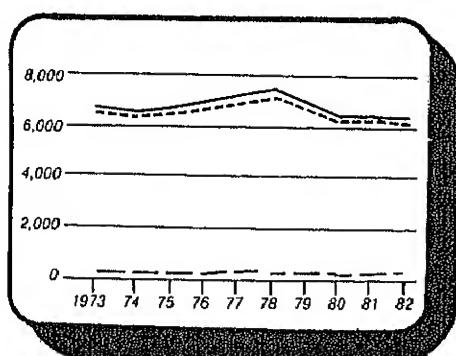
Totals may not equal sum of components due to independent rounding.

Geographic coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

## Motor Gasoline Supply and Disposition

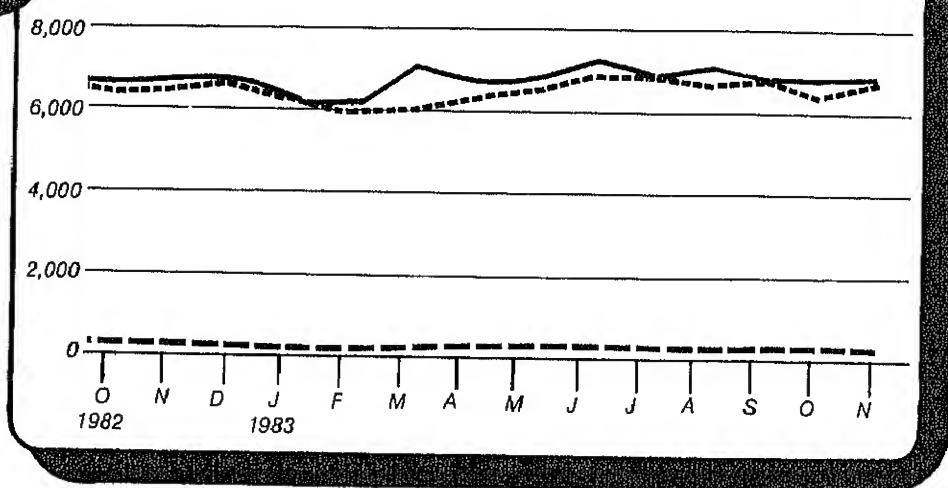
(Thousand Barrels Per Day)



Annual

**Legend**

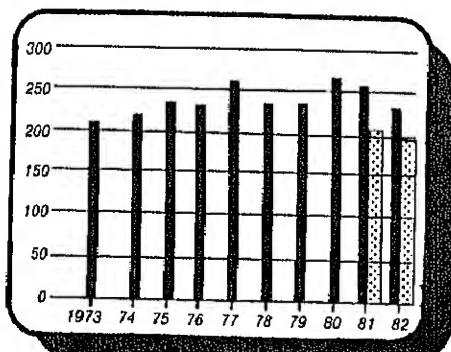
- Product Supplied
- - - Finished Gasoline Production
- · - Finished Gasoline Imports



Monthly

## Motor Gasoline Ending Stocks

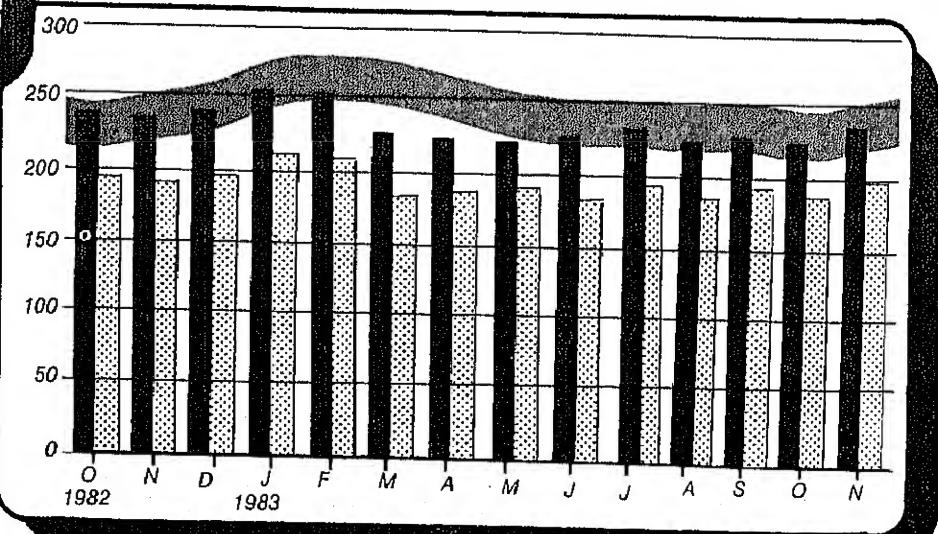
(Millions of Barrels)



Annual

**Legend**

- Total Motor Gasoline<sup>1</sup>
- ▨ Finished Motor Gasoline
- ▨ Average Stock Range<sup>2</sup>



Monthly

## Finished Motor Gasoline Supply and Disposition

	Supply			Disposition				Ending Stocks <sup>1</sup>	
	Total Production	Imports <sup>2</sup>	Stock Withdrawal <sup>2,3</sup>	Exports	Product Supplied			Total Motor Gasoline <sup>4</sup>	Finished Motor Gasoline
					Total	Unleaded <sup>5</sup>	Unleaded		
Thousand Barrels per Day									
1973	AVERAGE	6,535	134	9	4	6,674	NA	NA	209
1974	AVERAGE	6,360	204	-24	2	6,537	NA	NA	<sup>6</sup> 218
1975	AVERAGE	6,520	184	-28	2	6,675	NA	NA	235
1976	AVERAGE	6,841	131	10	3	6,978	NA	NA	231
1977	AVERAGE	7,033	217	-72	2	7,177	1,976	27.5	258
1978	AVERAGE	7,169	190	54	1	7,412	2,521	34.0	238
1979	AVERAGE	6,852	181	2	( <sup>s</sup> )	7,034	2,798	39.8	237
1980	AVERAGE	6,506	140	-66	1	6,579	3,067	46.6	<sup>6</sup> 261
1981	January	6,715	138	-421	( <sup>s</sup> )	6,431	3,141	48.8	276
	February	6,308	111	-118	1	6,301	3,095	49.1	284
	March	6,213	171	-81	( <sup>s</sup> )	6,303	3,097	49.1	285
	April	6,114	186	303	( <sup>s</sup> )	6,602	3,284	49.7	272
	May	6,122	150	344	1	6,615	3,115	47.1	259
	June	6,220	186	622	1	7,028	3,419	48.6	242
	July	6,405	151	268	( <sup>s</sup> )	6,823	3,424	50.2	228
	August	6,611	124	-95	3	6,637	3,344	50.4	233
	September	6,564	169	-70	2	6,662	3,338	50.1	237
	October	6,426	147	7	3	6,578	3,257	49.5	236
	November	6,564	148	-338	1	6,373	3,198	50.2	248
	December	6,586	197	-91	11	6,681	3,444	51.5	253
	AVERAGE	6,405	157	28	2	6,588	3,264	49.5	203
1982	January	6,167	128	-316	18	5,961	3,067	51.5	261
	February	5,899	133	172	8	6,196	3,210	51.8	257
	March	5,994	183	334	44	6,466	3,358	51.9	247
	April	6,095	185	650	33	6,897	3,495	50.7	221
	May	6,319	182	177	23	6,655	3,415	51.3	214
	June	6,754	230	-134	14	6,835	3,565	52.2	219
	July	6,768	225	-178	24	6,790	3,577	52.7	226
	August	6,419	291	-81	16	6,614	3,526	53.3	185
	September	6,527	223	-198	22	6,531	3,404	52.1	234
	October	6,262	185	-42	15	6,391	3,351	52.4	192
	November	6,273	211	101	11	6,574	3,451	52.5	230
	December	6,542	178	-165	7	6,549	3,485	53.2	<sup>6</sup> 235
	AVERAGE	6,338	197	25	20	6,539	3,409	52.1	<sup>6</sup> 194
1983	January	6,020	148	-186	( <sup>s</sup> )	5,981	3,352	56.0	251
	February	5,848	142	32	( <sup>s</sup> )	6,022	3,257	54.1	251
	March	5,897	205	765	23	6,843	3,620	52.9	224
	April	6,202	273	27	1	6,501	3,505	53.9	184
	May	6,386	284	-128	1	6,540	3,547	54.2	221
	June	6,646	265	118	22	7,008	3,796	54.2	183
	July	6,704	297	-210	18	6,773	3,752	55.4	231
	August	6,539	260	159	13	6,946	3,836	55.2	185
	September	6,582	285	-160	14	6,698	3,671	54.8	230
	October*	R 6,188	R 335	R 60	2	R 6,581	3,698	56.2	R 228
	November**	6,645	295	-278	NA	6,649	NA	NA	231
	AVERAGE	6,335	254	19	NA	6,598	NA	NA	194

<sup>1</sup> Stocks are totals as of end of period.

<sup>2</sup> Beginning in 1981, excludes blending components.

<sup>3</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>4</sup> Includes motor gasoline blending components.

<sup>5</sup> Includes gasohol.

<sup>6</sup> In January 1975, 1981, and 1983, significant numbers of new respondents were added to bulk terminal and pipeline surveys as a result of extensive investigation during the previous years. The major impact is on the reporting of stocks and stock withdrawals. Using the expanded coverage (new basis), end of year stocks would be: 1974-225, 1980-263, 1982-244 (Total) and 203 (Finished). Stock withdrawals during 1975, 1981, and 1983 are calculated using new basis stock levels.

(<sup>s</sup>) = Less than 500 barrels per day. NA = Not available. R = Revised data.

\* See Explanatory Note 9.3.

\*\* Italics denote preliminary data. See Explanatory Note 8.

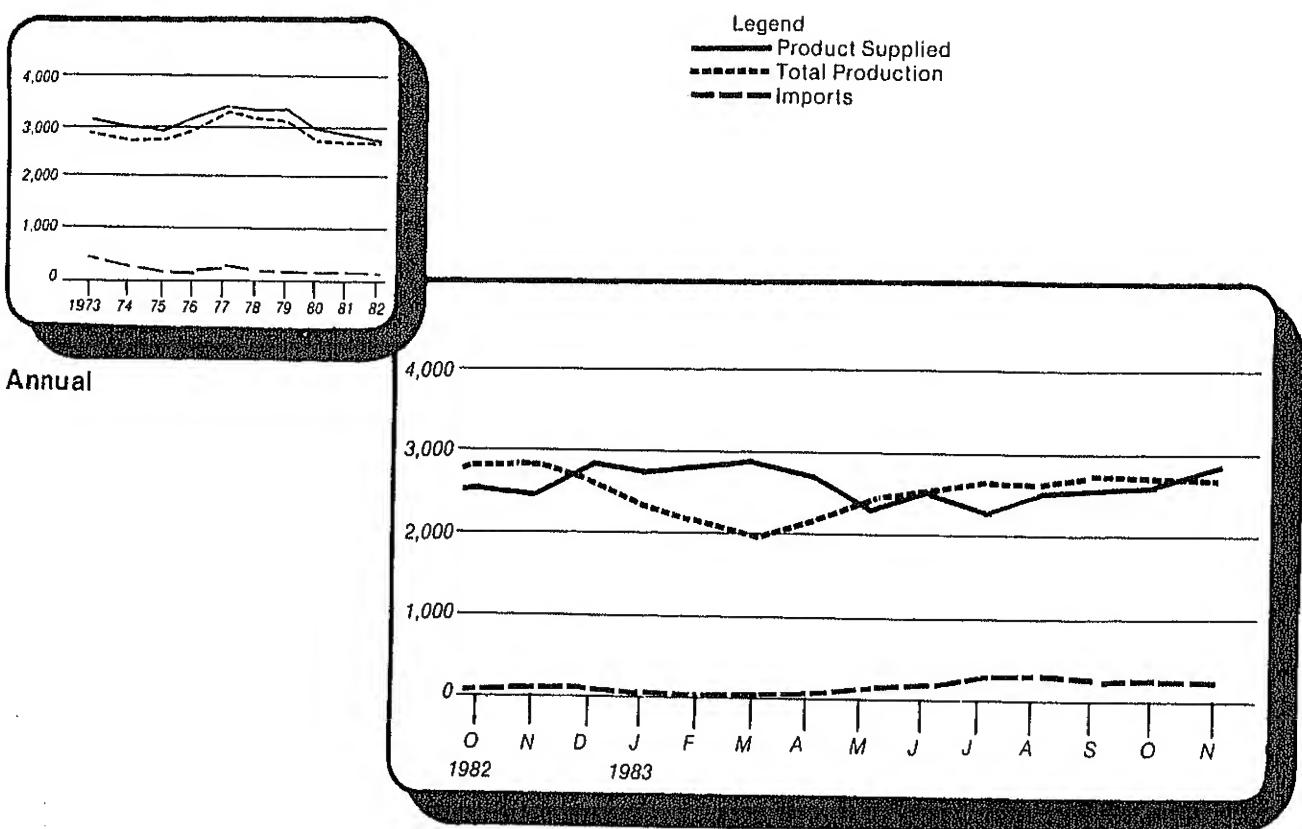
Note: Beginning in January 1981, survey forms were modified.

Geographic coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

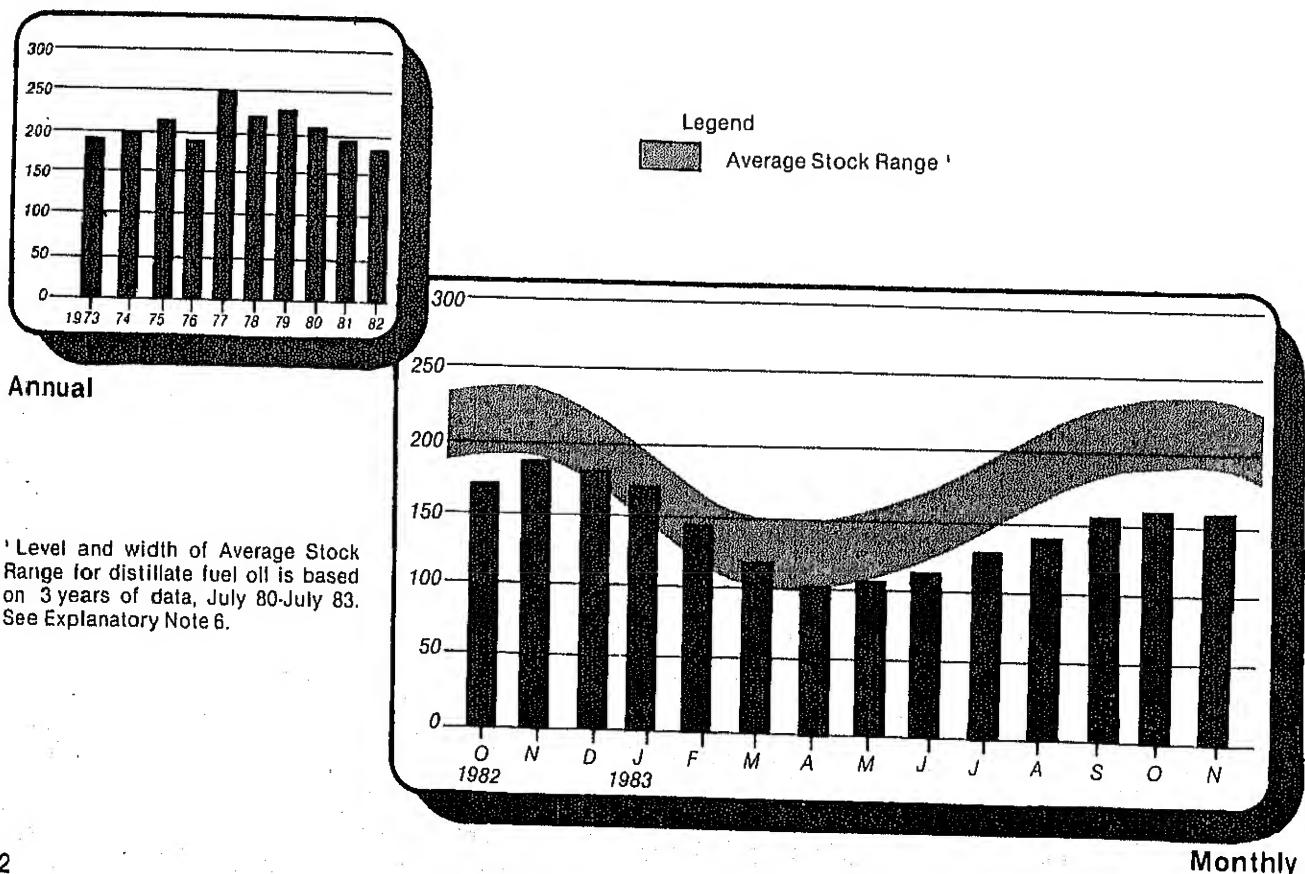
## Distillate Fuel Oil Supply and Disposition

(Thousand Barrels Per Day)



## Distillate Fuel Oil Ending Stocks

(Millions of Barrels)



<sup>1</sup> Level and width of Average Stock Range for distillate fuel oil is based on 3 years of data, July 80-July 83. See Explanatory Note 6.

## Distillate Fuel Oil Supply and Disposition

	Supply				Disposition		Ending Stocks <sup>1</sup>
	Total Production	Imports	Stock Withdrawal <sup>2</sup>	Crude Used Directly <sup>3</sup>	Exports	Products Supplied <sup>3</sup>	
	Thousand Barrels per Day						Million Barrels
1973 AVERAGE	2,822	392	-115	2	9	3,092	196
1974 AVERAGE	2,669	289	-9	2	2	2,948	<sup>4</sup> 200
1975 AVERAGE	2,654	155	40	2	1	2,851	209
1976 AVERAGE	2,924	146	62	1	1	3,133	186
1977 AVERAGE	3,278	250	-176	1	1	3,352	250
1978 AVERAGE	3,167	173	93	1	3	3,432	216
1979 AVERAGE	3,153	193	-34	1	3	3,311	229
1980 AVERAGE	2,662	142	64	1	3	2,866	<sup>4</sup> 205
1981 January	2,989	273	836	11	(s)	4,109	179
February	2,809	325	246	11	17	3,373	173
March	2,484	147	264	9	(s)	2,904	164
April	2,418	116	-9	10	3	2,532	165
May	2,454	179	-232	10	(s)	2,411	172
June	2,501	225	-270	9	(s)	2,464	180
July	2,395	179	-204	10	2	2,378	186
August	2,656	174	-450	8	(s)	2,388	200
September	2,610	129	-235	10	1	2,513	207
October	2,485	119	197	9	5	2,803	201
November	2,716	124	36	11	6	2,880	200
December	2,856	95	277	11	26	3,212	192
AVERAGE	2,613	173	38	10	5	2,829	
1982 January	2,591	97	876	10	90	3,484	164
February	2,427	132	605	11	90	3,085	147
March	2,288	48	682	10	84	2,945	126
April	2,358	59	612	13	64	2,978	108
May	2,618	74	-183	10	75	2,444	114
June	2,729	102	-335	10	55	2,452	124
July	2,734	125	-789	11	24	2,058	148
August	2,507	80	-339	10	40	2,218	159
September	2,657	61	-85	12	139	2,507	161
October	2,838	91	-289	8	66	2,581	170
November	2,860	145	-514	8	24	2,475	186
December	2,655	109	225	10	143	2,855	<sup>4</sup> 179
AVERAGE	2,606	93	35	10	74	2,671	
1983 January	2,314	58	561	NA	173	2,760	168
February	2,136	58	742	NA	105	2,832	147
March	1,991	42	926	NA	59	2,900	119
April	2,169	73	518	NA	47	2,713	103
May	2,444	141	-193	NA	50	2,341	109
June	2,545	175	-154	NA	40	2,526	114
July	2,600	259	-556	NA	55	2,248	131
August	2,612	302	-403	NA	43	2,467	144
September	2,725	253	-374	NA	37	2,568	155
October*	R 2,682	R 255	R -275	NA	55	R 2,606	R 163
November**	2,673	222	-7	NA	NA	2,848	162
AVERAGE	2,446	168	68	NA	NA	2,617	

<sup>1</sup> Stocks are totals as of end of period.

<sup>2</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>3</sup> Beginning in January 1983, product supplied for distillate fuel oil does not include crude oil used directly. See Explanatory Note 4.

\* In January 1975, 1981, and 1983, significant numbers of new respondents were added to bulk terminal and pipeline surveys as a result of extensive investigation during the previous years. The major impact is on the reporting of stocks and stock withdrawals. Using the expanded coverage (new basis), end of year stocks would be: 1974-224, 1980-205, and 1982-186. Stock withdrawals during 1975, 1981, and 1983 are calculated using new basis stock levels.

(s) = Less than 500 barrels per day. NA = Not available. R = Revised data.

Totals may not equal sum of components due to independent rounding.

\* See Explanatory Note 9.4.

\*\* Italics denote preliminary data. See Explanatory Note 8.

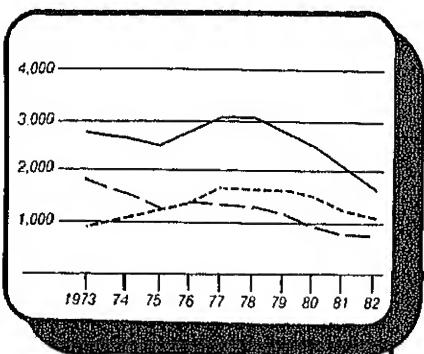
Note: Beginning in January 1981, survey forms were modified.

Geographic Coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

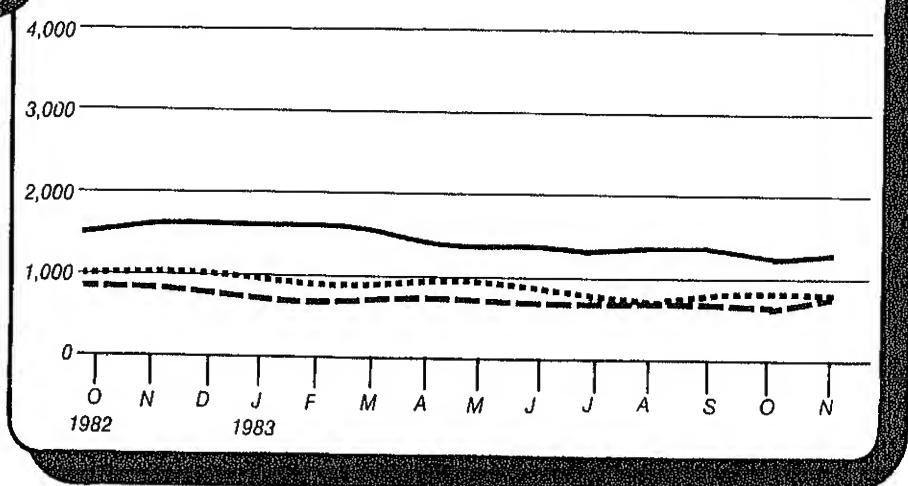
## Residual Fuel Oil Supply and Disposition

(Thousand Barrels Per Day)



Annual

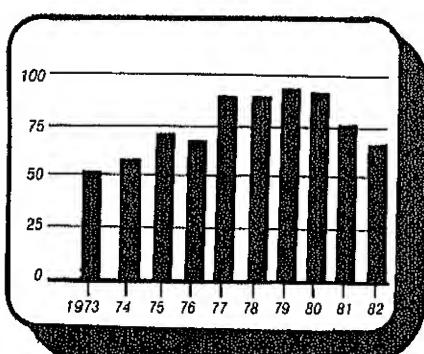
Legend  
 — Product Supplied  
 - - - Total Production  
 - - Imports



Monthly

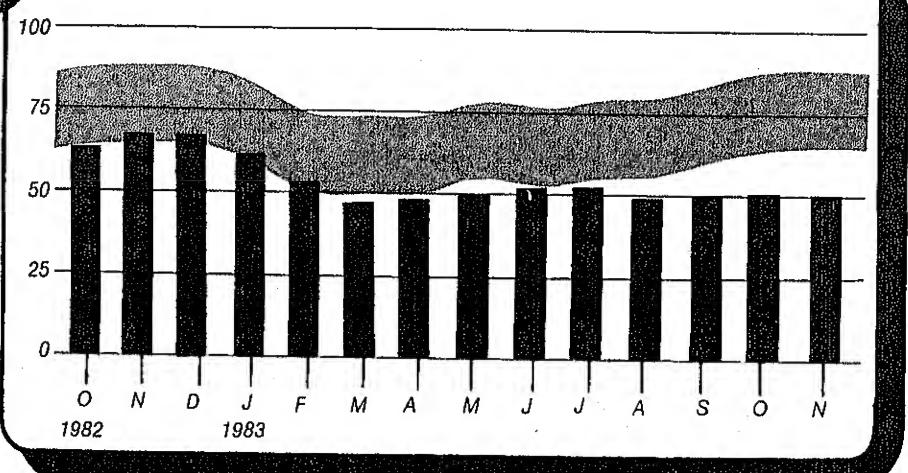
## Residual Fuel Oil Ending Stocks

(Millions of Barrels)



### Legend

[Bar] Average Stock Range<sup>1</sup>



Monthly

## Residual Fuel Oil Supply and Disposition

	Supply				Disposition		Ending Stocks <sup>1</sup>
	Total Production	Imports	Stock Withdrawal <sup>2</sup>	Crude Used Directly <sup>3</sup>	Exports	Products Supplied <sup>3</sup>	
	Thousand Barrels per Day						Million Barrels
1973 AVERAGE	971	1,853	5	17	23	2,822	53
1974 AVERAGE	1,070	1,587	-17	13	14	2,639	<sup>4</sup> 60
1975 AVERAGE	1,235	1,223	2	15	15	2,462	74
1976 AVERAGE	1,377	1,413	5	17	12	2,801	72
1977 AVERAGE	1,754	1,359	-48	13	6	3,071	90
1978 AVERAGE	1,667	1,355	-1	13	13	3,023	90
1979 AVERAGE	1,687	1,151	-15	12	9	2,826	96
1980 AVERAGE	1,580	939	10	12	33	2,508	<sup>4</sup> 92
1981 January	1,612	1,015	302	32	65	2,896	82
February	1,565	954	150	44	125	2,588	78
March	1,424	699	100	48	145	2,126	75
April	1,320	584	66	49	151	1,868	73
May	1,223	741	-170	49	25	1,817	78
June	1,232	540	291	49	76	2,037	69
July	1,174	830	2	48	82	1,971	69
August	1,231	819	-179	50	69	1,852	75
September	1,292	841	-176	51	126	1,882	80
October	1,238	786	8	54	202	1,884	80
November	1,227	880	-49	53	203	1,909	81
December	1,329	916	110	52	157	2,250	78
AVERAGE	1,321	800	37	48	118	2,088	
1982 January	1,235	831	301	53	235	2,185	69
February	1,186	956	363	53	213	2,344	58
March	1,123	912	12	53	197	1,903	58
April	1,166	788	150	52	234	1,923	54
May	1,128	742	-172	52	191	1,560	59
June	1,074	652	-57	50	217	1,501	61
July	1,028	657	56	49	239	1,550	59
August	965	551	203	47	235	1,531	53
September	1,008	872	-306	44	148	1,470	62
October	955	783	-57	43	234	1,490	64
November	989	837	-94	43	182	1,591	66
December	989	747	6	43	186	1,598	<sup>4</sup> 66
AVERAGE	1,070	776	32	48	209	1,716	
1983 January	935	691	243	NA	294	1,574	61
February	857	632	270	NA	191	1,568	53
March	833	686	220	NA	169	1,569	46
April	942	743	-10	NA	310	1,364	47
May	930	709	-139	NA	190	1,310	51
June	832	676	28	NA	219	1,317	50
July	771	682	-58	NA	90	1,306	52
August	706	705	115	NA	165	1,362	48
September	815	690	-47	NA	134	1,324	50
October*	R 799	R 634	R -56	NA	153	R 1,224	R 51
November**	794	764	-115	NA	NA	1,291	51
AVERAGE	837	692	40	NA	NA	1,382	

<sup>1</sup> Stocks are totals as of end of period.

<sup>2</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>3</sup> Beginning in January 1983, product supplied for residual fuel oil does not include crude oil used directly. See Explanatory Note 4.

<sup>4</sup> In January 1975, 1981, and 1983, significant numbers of new respondents were added to bulk terminal and pipeline surveys as a result of extensive investigation during the previous years. The major impact is on the reporting of stocks and stock withdrawals. Using the expanded coverage (new basis), end of year stocks would be: 1974-75, 1980-91, and 1982-6B. Stock withdrawals during 1975, 1981, and 1983 are calculated using new basis stock levels.

Totals may not equal sum of components due to independent rounding.

NA = Not available. R = Revised data.

\* See Explanatory Note 9.4.

\*\* Italics denote preliminary data. See Explanatory Note 8.

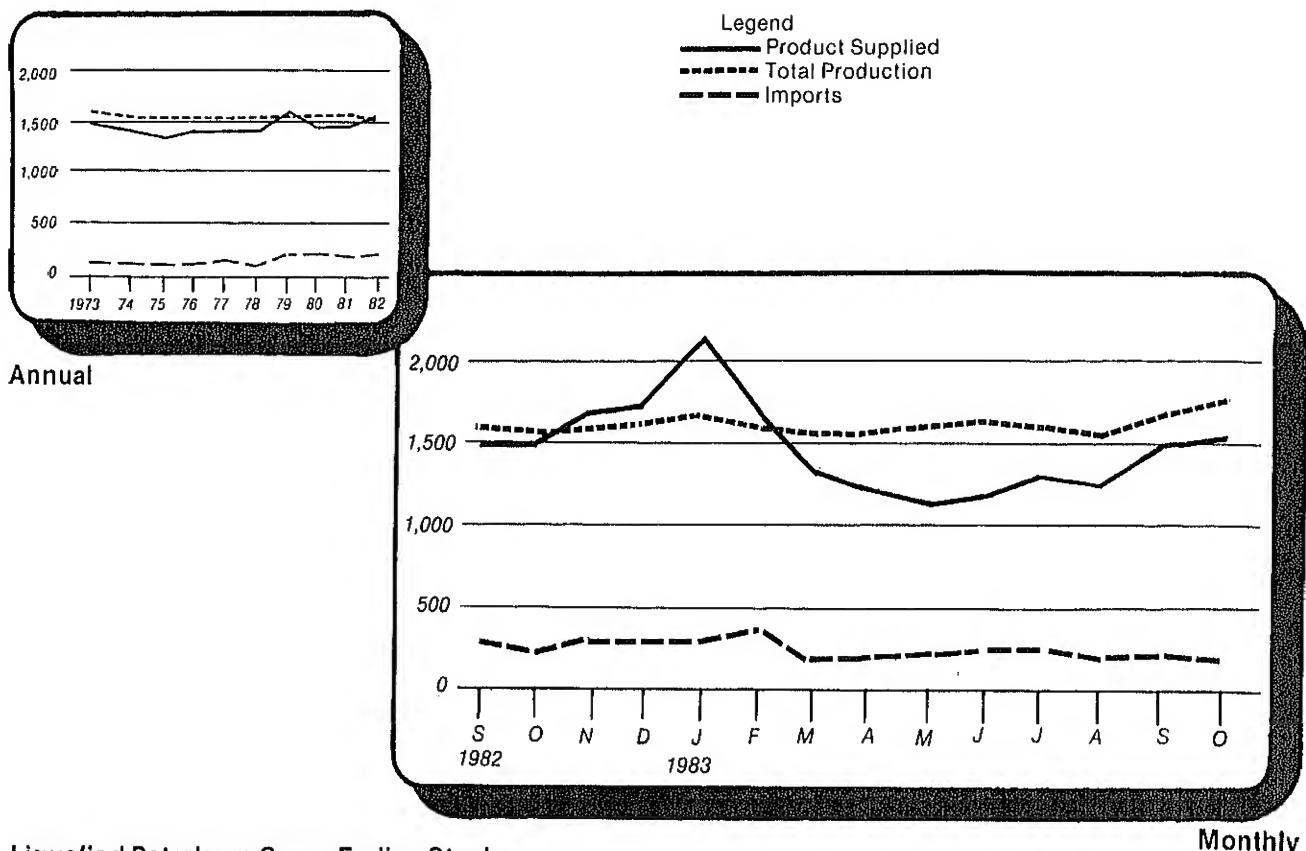
Note: Beginning in January 1981, survey forms were modified.

Geographic Coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

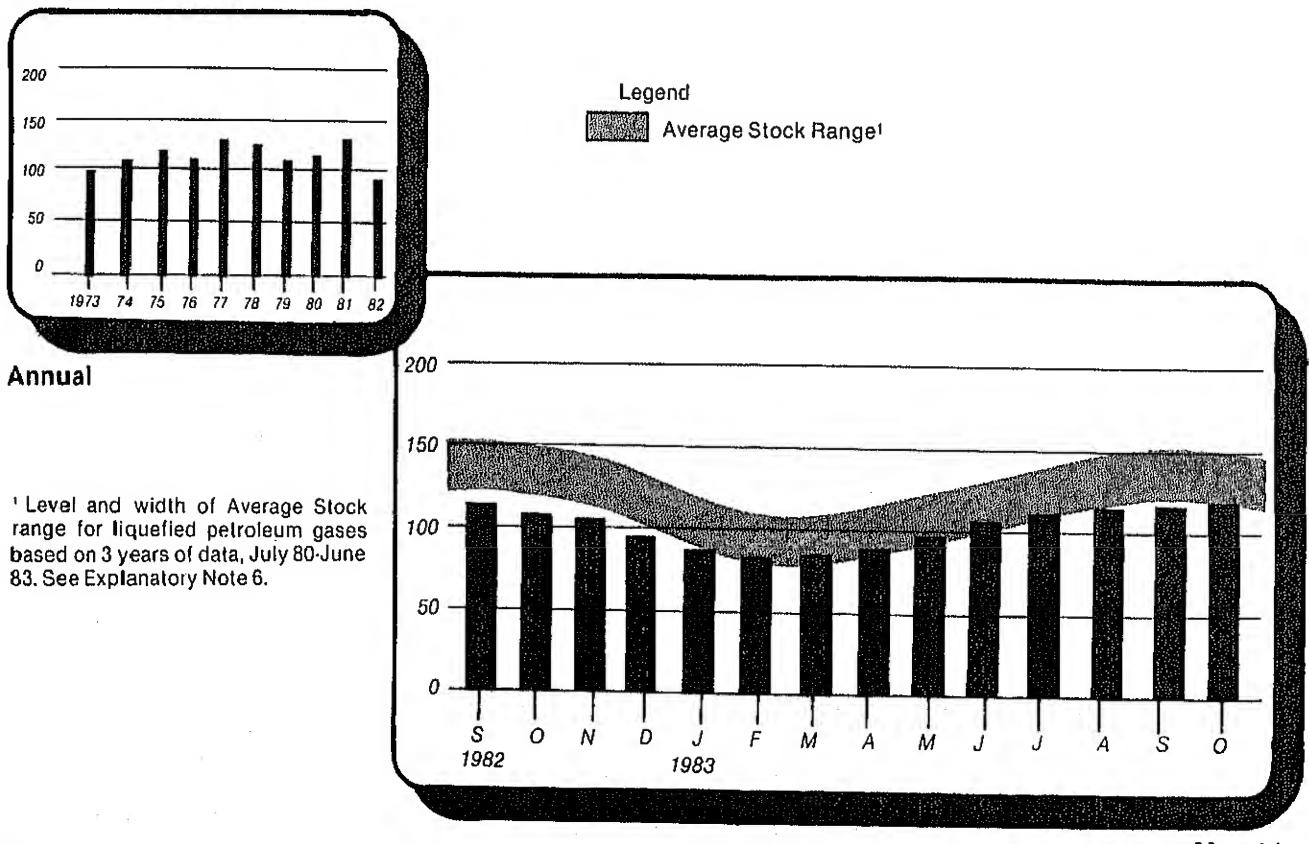
## Liquefied Petroleum Gases Supply and Disposition

(Thousand Barrels Per Day)



## Liquefied Petroleum Gases Ending Stocks

(Millions of Barrels)



<sup>1</sup> Level and width of Average Stock range for liquefied petroleum gases based on 3 years of data, July 80-June 83. See Explanatory Note 6.

## Liquefied Petroleum Gases Supply and Disposition

	Supply			Disposition			Ending Stocks <sup>1</sup>	
	Total Production	Imports	Stock Withdrawal <sup>2</sup>	Refinery Inputs	Exports	Products Supplied		
	Thousand Barrels per Day						Million Barrels	
1973	AVERAGE	1,600	132	-35	220	27	1,449	99
1974	AVERAGE	1,565	123	-38	220	25	1,406	<sup>3</sup> 113
1975	AVERAGE	1,527	112	-35	246	26	1,333	125
1976	AVERAGE	1,535	130	24	260	25	1,404	116
1977	AVERAGE	1,566	161	-55	233	18	1,422	136
1978	AVERAGE	1,537	123	12	239	20	1,413	132
1979	AVERAGE	1,556	217	70	236	15	1,592	111
1980	AVERAGE	1,535	216	-27	233	21	1,469	<sup>3</sup> 120
1981	January	1,617	306	363	352	21	1,913	117
	February	1,593	327	173	303	21	1,769	112
	March	1,551	260	-4	257	20	1,530	112
	April	1,586	214	-236	231	26	1,308	119
	May	1,587	189	-258	220	19	1,279	127
	June	1,567	206	-208	237	24	1,304	133
	July	1,507	213	-258	215	17	1,229	141
	August	1,592	195	-242	235	149	1,160	149
	September	1,622	199	-75	287	21	1,438	151
	October	1,593	287	72	320	76	1,556	149
	November	1,571	280	86	383	58	1,495	146
	December	1,468	255	379	428	50	1,624	135
	AVERAGE	1,571	244	-18	289	42	1,466	
1982	January	1,565	314	443	391	67	1,863	121
	February	1,466	291	243	327	51	1,621	114
	March	1,544	223	211	289	74	1,615	108
	April	1,506	188	98	257	77	1,458	105
	May	1,565	186	-71	234	43	1,403	107
	June	1,615	192	-86	262	106	1,254	109
	July	1,476	227	-13	253	37	1,399	110
	August	1,511	125	-45	254	61	1,276	111
	September	1,638	247	37	274	85	1,463	110
	October	1,517	194	97	306	81	1,421	107
	November	1,542	267	175	363	37	1,583	102
	December	1,580	258	256	395	56	1,642	<sup>3</sup> 94
	AVERAGE	1,528	226	111	300	65	1,499	
1983	January	1,662	240	618	313	118	2,088	84
	February	1,560	305	84	237	76	1,636	81
	March	1,517	166	-51	189	127	1,316	83
	April	1,531	124	-107	198	116	1,232	86
	May	1,545	167	-326	207	84	1,094	96
	June	1,593	172	-333	205	59	1,169	106
	July	1,571	191	-206	217	55	1,284	112
	August	1,505	160	-183	229	29	1,225	118
	September	1,625	178	-23	236	86	1,457	119
	October*	1,688	160	-61	268	32	1,487	121
	AVERAGE	1,580	185	-59	230	78	1,398	

<sup>1</sup> Stocks are totals as of end of period.

<sup>2</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>3</sup> In January 1975, 1981, and 1983, significant numbers of new respondents were added to bulk terminal and pipeline surveys as a result of extensive investigation during the previous years. The major impact is on the reporting of stocks and stock withdrawals. Using the expanded coverage (new basis), end of year stocks would be: 1974-113, 1980-128, and 1982-103. Stock withdrawals during 1975, 1981, and 1983 are calculated using new basis stock levels.

Totals may not equal sum of components due to independent rounding.

\* See Explanatory Note 9.5.

Geographic coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

## Other Petroleum Products<sup>1</sup> Supply and Disposition

		Supply			Disposition			Ending Stocks <sup>2</sup>
		Total Production	Imports	Stock Withdrawal <sup>3</sup>	Refinery Inputs	Exports	Products Supplied	
		Thousand Barrels per Day						Million Barrels
1973	AVERAGE	3,693	502	-9	750	166	3,270	208
1974	AVERAGE	3,558	432	-28	665	174	3,123	<sup>4</sup> 218
1975	AVERAGE	3,424	277	-2	537	160	3,002	219
1976	AVERAGE	3,643	206	-5	524	175	3,145	220
1977	AVERAGE	3,912	205	-27	514	165	3,410	230
1978	AVERAGE	4,046	166	14	492	167	3,568	225
1979	AVERAGE	4,153	195	-37	352	209	3,749	238
1980	AVERAGE	3,956	210	-23	311	198	3,634	<sup>4</sup> 247
1981	January	3,821	162	80	851	132	3,081	296
	February	3,723	182	-200	538	208	2,958	302
	March	3,722	230	-55	642	210	3,043	304
	April	3,711	230	24	733	192	3,040	303
	May	3,892	229	-58	594	238	3,231	305
	June	3,925	218	-29	656	197	3,261	306
	July	3,852	149	284	791	212	3,282	297
	August	3,876	276	-33	676	219	3,225	298
	September	3,718	285	215	883	176	3,159	291
	October	3,503	241	193	710	227	3,000	285
	November	3,579	262	33	784	154	2,935	284
	December	3,543	243	71	805	223	2,829	282
	AVERAGE	3,739	226	46	723	199	3,088	
1982	January	3,171	269	-7	624	180	2,631	282
	February	3,403	305	-153	663	138	2,755	287
	March	3,466	243	-191	725	161	2,631	293
	April	3,408	309	73	796	204	2,790	290
	May	3,317	318	184	824	210	2,785	285
	June	3,547	315	123	812	216	2,954	281
	July	3,660	408	-1	856	187	3,023	281
	August	3,583	346	217	743	202	3,201	274
	September	3,533	375	105	749	213	3,051	271
	October	3,529	383	244	915	266	2,976	264
	November	3,498	423	-28	837	269	2,786	264
	December	3,324	313	366	885	275	2,842	<sup>4</sup> 253
	AVERAGE	3,453	334	80	787	211	2,869	
1983	January	3,222	297	-371	570	271	2,307	271
	February	3,270	287	-1	680	232	2,645	271
	March	3,400	298	-94	570	249	2,786	273
	April	3,363	377	3	596	247	2,901	273
	May	3,448	364	26	694	242	2,902	273
	June	3,674	427	99	715	292	3,197	270
	July	3,703	393	106	757	209	3,237	266
	August	3,774	435	23	689	242	3,302	266
	September	3,861	460	-31	768	236	3,287	267
	October*	3,579	427	-124	701	195	2,985	270
	AVERAGE	3,531	377	-37	674	241	2,956	

<sup>1</sup> Includes natural gasoline and isopentane, unfractionated stream, plant condensate, other liquids; and all finished petroleum products except finished motor gasoline, distillate fuel oil, residual fuel oil, and liquefied petroleum gases.

<sup>2</sup> Stocks are totals as of end of period.

<sup>3</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>4</sup> In January 1975, 1981, and 1983, significant numbers of new respondents were added to bulk terminal and pipeline surveys as a result of extensive investigation during the previous years. The major impact is on the reporting of stocks and stock withdrawals. Using the expanded coverage (new basis), end of year stocks would be: 1974-220, 1980-249, and 1982-259. Stock withdrawals during 1975, 1981, and 1983 are calculated using new basis stock levels.

Totals may not equal sum of components due to independent rounding.

\* See Explanatory Note 9.6.

Geographic Coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

# Sources

1. 1973 through 1976: Bureau of Mines, U.S. Department of the Interior, *Petroleum Statement, Annual* and *PAD Districts Supply/Demand, Annual*, Mineral Industry Surveys.
2. 1977 through 1980: Energy Information Administration, U.S. Department of Energy, *Monthly Petroleum Statistics Report*, (unleaded gasoline category).
3. 1977 through 1980: Energy Information Administration, U.S. Department of Energy, *Petroleum Statement, Annual* and *PAD Districts Supply/Demand, Annual*, Energy Data Reports.
4. January 1981 through December 1982: Energy Information Administration, U.S. Department of Energy, *Petroleum Supply Annual*.
5. January 1983 through October 1983: Detailed statistics in appropriate issues of the *Petroleum Supply Monthly*. (See Explanatory Notes 9.1 through 9.6).
6. November 1983: Estimates based on EIA weekly data (except domestic crude oil production) (see Explanatory Note 1.1).
7. January 1983 through November 1983: Domestic crude oil production estimate based on historical statistics from State Conservation Agencies the U.S. Geological Survey. (See Explanatory Note 3).



## Detailed Statistics

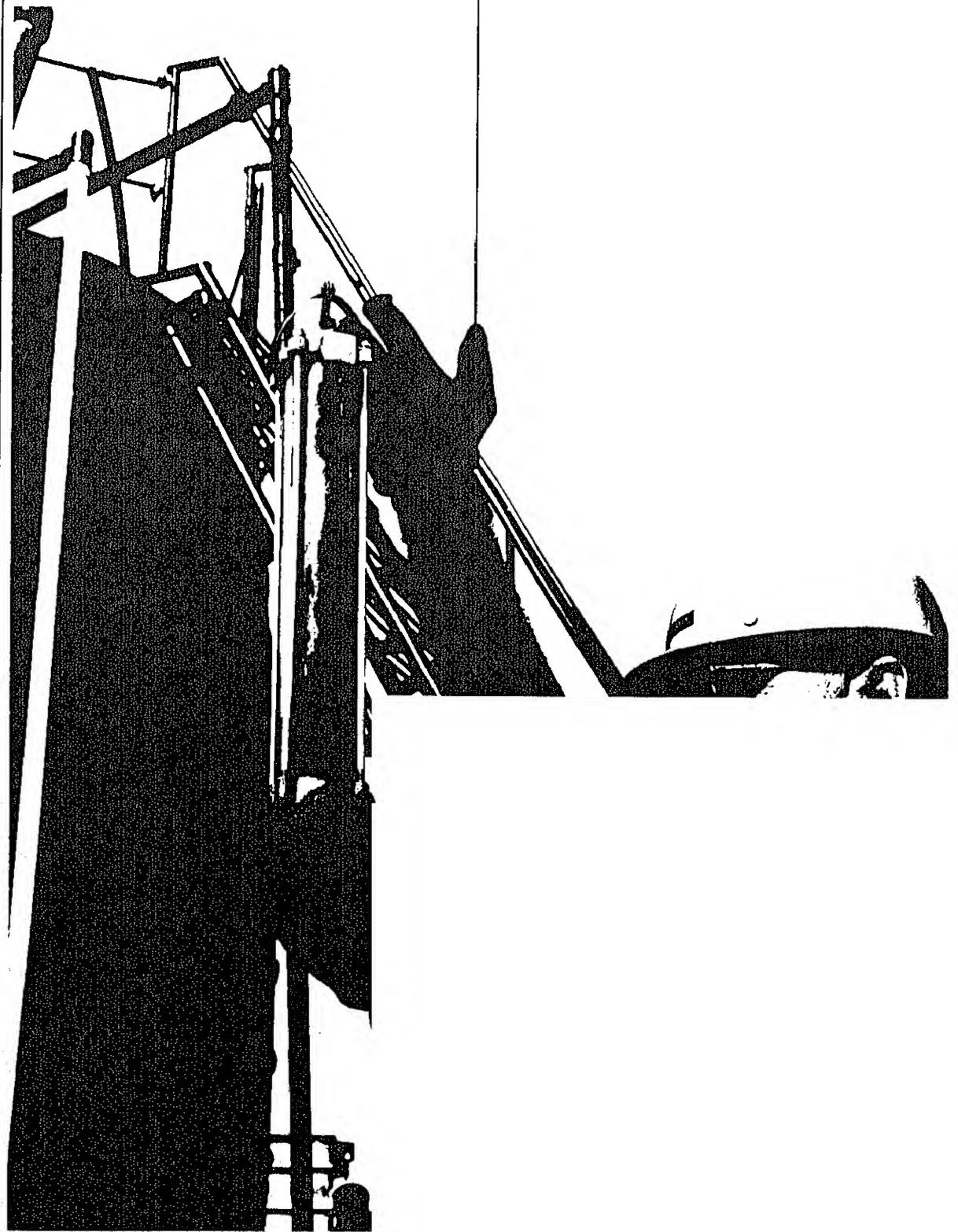




Table 1. U.S. Petroleum Balance, October 1983

	Current Month		Year-to-date	
	Thousand Barrels	Thousand Barrels per Day	Thousand Barrels	Thousand Barrels per Day
<b>Crude Oil (Including Lease Condensate)</b>				
Field Production				
(1) Alaska .....	E 53,658	1,731	E 521,336	1,715
(2) Lower 48 States .....	E 214,608	6,923	E 2,112,351	6,949
(3) Total U.S. ....	E 268,266	8,654	E 2,633,687	8,663
Net Imports				
(4) Imports (Gross Excluding SPR) .....	100,558	3,244	932,231	3,067
(5) SPR Imports .....	6,262	202	74,195	244
(6) Exports .....	4,336	140	51,443	169
(7) Imports (Net Including SPR) .....	102,484	3,306	954,983	3,141
Other Sources				
(8) SPR Withdrawal (+) or Addition (-) .....	-6,240	-201	-73,413	-241
(9) Other Stock Withdrawal (+) or Addition (-) .....	650	21	-939	-3
(10) Product Supplied and Losses .....	-1,997	-64	-20,085	-68
(11) Unaccounted for <sup>1</sup> .....	2,151	69	58,106	191
(12) Total Other Sources .....	-5,436	-175	-36,331	-120
(13) Crude Input to Refineries .....	365,314	11,784	3,552,339	11,685
(13) = (3) + (7) + (12)				
<b>Natural Gas Plant Liquids (NGPL)</b>				
(14) Field Production .....	49,720	1,604	474,080	1,560
(15) Imports <sup>2</sup> .....	524	17	4,214	14
(16) Stock Withdrawal (+) or Addition (-) <sup>2</sup> .....	-1,739	-56	-7,044	-23
(17) Total NGPL Supply .....	48,505	1,565	471,260	1,550
Other Liquids				
Unfinished Oils and Gasoline Blending Components, Total				
(18) Stock Withdrawal (+) or Addition (-) .....	28	1	-5,501	-18
(19) Imports .....	8,249	266	78,761	259
(20) Other Hydrocarbons and Alcohol New Supply (Field Production) .....	1,836	59	16,361	54
(21) Refinery Processing Gain <sup>1</sup> .....	16,053	518	145,310	478
(22) Crude Oil Product Supplied .....	1,967	63	19,639	65
(23) Total Other Liquids .....	28,133	908	254,570	837
(23) = (18) through (22)				
(24) Total Production of Products <sup>3</sup> .....	441,953	14,257	4,278,169	14,073
(24) = (13) + (17) + (23)				
<b>Net Imports of Refined Products <sup>3</sup></b>				
(25) Imports (Gross) .....	47,350	1,527	421,752	1,387
(26) Exports .....	13,518	436	178,228	586
(27) Imports (Net) .....	33,833	1,091	243,524	801
(28) Total New Supply of Products .....	475,785	16,348	4,521,693	14,874
(28) = (24) + (27)				
(29) Refined Products Stock Withdrawal (+) or Addition (-) <sup>3</sup> .....	-12,428	-401	37,036	122
(30) Total Petroleum Products Supplied for Domestic Use .....	463,357	14,947	4,558,729	14,996
(30) = (28) + (29)				
(31) Finished Motor Gasoline .....	203,898	6,581	2,004,289	6,593
(32) Distillate Fuel Oil .....	80,792	2,606	788,500	2,594
(33) Residual Fuel Oil .....	37,954	1,224	422,771	1,391
(34) Liquefied Petroleum Gases .....	46,099	1,487	424,883	1,398
(35) Other <sup>4</sup> .....	92,547	2,985	898,646	2,956
(36) Crude Oil .....	1,967	63	19,639	65
(37) Total Product Supplied .....	463,357	14,947	4,558,729	14,996
(37) = (31) through (36)				
<b>Ending Stocks, All Oils</b>				
(38) Crude Oil and Lease Condensate (Excluding SPR) .....	350,983	--	350,983	--
(39) Strategic Petroleum Reserve (SPR) .....	367,240	--	367,240	--
(40) Unfinished Oils .....	112,120	--	112,120	--
(41) Gasoline Blending Components .....	41,203	--	41,203	--
(42) Natural Gasoline and Unfractionated Stream <sup>2</sup> .....	18,512	--	18,512	--
(43) Finished Refined Products <sup>3</sup> .....	621,820	--	621,820	--
(44) Total Stocks .....	1,511,878	--	1,511,878	--

<sup>1</sup> A balancing item.<sup>2</sup> Includes isopentane, natural gasoline, unfractionated stream, and plant condensate only.<sup>3</sup> For products included see Explanatory Note 9.7.<sup>4</sup> Includes natural gasoline and isopentane, unfractionated stream, plant condensate, other liquids; and all finished petroleum products except finished motor gasoline, distillate fuel oil, residual fuel oil and liquefied petroleum gases.

E = Estimated.

-- Not Applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes 1, 2 and 9.7.

**Table 2. Supply and Disposition of Crude Oil and Petroleum Products, October 1983**  
 (Thousands of Barrels)

Commodity	Supply				Disposition					
	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Crude Losses	Refinery Inputs	Exports	Products Supplied	Ending Stocks
Crude Oil (including lease condensate) .....	E 268,266	0	106,820	-5,590	2,151	30	365,314	4,336	1,967	718,223
Natural Gas Liquids and LRGs .....	49,386	10,662	5,493	-3,632	0	0	14,475	987	46,448	139,256
Natural Gasoline and Isopentane .....	4,814	0	279	623	0	0	5,369	0	347	6,385
Unfractionated Stream .....	2,360	0	0	-2,360	0	0	0	0	0	11,675
Plant Condensate .....	557	0	246	-2	0	0	799	0	2	452
Liquefied Petroleum Gases .....	41,655	10,662	4,969	-1,893	0	0	8,307	987	46,099	120,744
Ethane .....	8,712	625	564	-1,251	0	0	69	(s)	8,581	7,135
Propane .....	14,481	8,216	1,218	-720	0	0	149	534	23,952	61,564
Butane .....	6,625	1,643	1,986	-468	0	0	5,403	453	3,980	26,509
Butane-Propane Mixtures .....	156	127	631	-26	0	0	302	0	586	1,839
Ethane-Propane Mixtures .....	8,575	0	571	-98	0	0	0	0	9,048	12,846
Isobutane .....	3,106	51	0	-770	0	0	2,384	0	0	10,851
Other Liquids .....	1,836	0	8,249	28	0	0	15,572	0	-5,459	153,323
Other Hydrocarbons and Alcohol .....	1,836	0	0	14	0	0	1,850	0	0	383
Unfinished Oils .....	0	0	7,629	525	0	0	9,506	0	-1,352	112,120
Motor Gasoline Blending Components .....	0	0	620	-513	0	0	4,214	0	-4,107	40,497
Aviation Gasoline Blending Components .....	0	0	0	2	0	0	2	0	0	323
Finished Petroleum Products .....	334	400,752	42,382	-10,535	0	0	0	12,531	420,401	501,076
Finished Motor Gasoline .....	47	191,771	10,379	1,852	0	0	0	51	203,998	187,827
Finished Leaded Motor Gasoline .....	29	84,704	3,825	838	0	0	0	51	89,345	93,772
Finished Unleaded Motor Gasoline .....	18	107,067	6,554	1,014	0	0	0	0	114,653	94,055
Finished Aviation Gasoline .....	159	679	(s)	102	0	0	0	0	0	2,441
Naphtha-Type Jet Fuel .....	0	4,996	0	681	0	0	0	(s)	5,677	6,124
Kerosene-Type Jet Fuel .....	0	26,247	1,534	-2,283	0	0	0	24	25,474	37,268
Kerosene .....	4	4,250	358	-1,013	0	0	0	218	3,381	10,207
Distillate Fuel Oil .....	0	83,131	7,899	-8,537	0	0	0	1,701	80,792	163,285
Residual Fuel Oil .....	0	24,769	19,645	-1,729	0	0	0	4,732	37,954	51,420
Naphtha < 400 Deg. for Petro. Feed. Use .....	0	4,396	153	154	0	0	0	285	4,418	1,912
Other Oils > 400 Deg. for Petro. Feed. Use .....	0	8,175	2	231	0	0	0	207	8,201	1,926
Special Naphthas .....	81	1,966	916	-319	0	0	0	47	2,597	3,484
Lubricants .....	0	4,934	394	318	0	0	0	483	5,163	10,636
Waxes .....	0	485	11	1	0	0	0	34	463	745
Petroleum Coke .....	0	13,048	0	-720	0	0	0	4,713	7,615	5,550
Asphalt and Road Oil .....	0	13,335	262	768	0	0	0	8	14,357	16,350
Still Gas .....	0	17,000	0	0	0	0	0	0	17,000	0
Miscellaneous Products .....	43	1,570	828	-41	0	0	0	27	2,373	1,901
Total .....	319,822	411,414	162,944	-19,729	2,151	30	395,361	17,853	463,357	1,511,878

<sup>1</sup> Unaccounted for crude oil is a balancing item.

(s) Less than 500 barrels.

E = Estimated.

Note: Total may not equal sum of components due to independent rounding.  
 Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 3. Year-to-Date Supply and Disposition of Crude Oil and Petroleum Products, January - October 1983  
(Thousand Barrels)

Commodity	Field Production	Supply				Disposition			
		Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Crude Losses	Refinery Inputs	Exports	Products Supplied
Crude Oil (including lease condensate) .....	E 2,633,687	0	1,006,426	-74,352	58,106	446	3,552,339	51,443	19,639
Natural Gas Liquids and LRGs .....	470,392	98,964	60,570	-25,070	0	0	134,617	23,751	446,488
Natural Gasoline and Isopentane .....	75,042	0	2,119	-398	0	0	55,177	0	21,586
Linfractionated Stream .....	7,805	0	0	-7,636	0	0	169	0	11,675
Plant Condensate .....	6,246	0	2,095	990	0	0	9,311	0	452
Liquefied Petroleum Gases .....	381,299	98,964	56,356	-18,026	0	0	69,960	23,751	424,883
Ethane .....	77,626	4,741	13,442	-1,164	0	0	789	30	93,825
Propane .....	133,719	81,188	12,912	-3,327	0	0	1,264	14,184	209,043
Butane .....	61,956	11,686	13,844	-9,187	0	0	40,165	9,556	27,958
Butane-Propane Mixtures .....	1,640	1,127	5,417	286	0	0	2,393	0	6,077
Ethane-Propane Mixtures .....	78,134	0	10,742	-1,564	0	0	48	0	1,839
Isobutane .....	28,224	222	0	-2,430	0	0	25,301	0	87,264
Other Liquids .....	16,361	0	78,761	-5,501	0	0	140,178	0	-50,557
Other Hydrocarbons and Alcohol .....	16,361	0	0	-72	0	0	16,289	0	383
Unfinished Oils .....	0	0	69,276	-6,843	0	0	87,512	0	112,120
Motor Gasoline Blending Components .....	0	0	9,485	1,245	0	0	35,725	0	-24,995
Aviation Gasoline Blending Components .....	0	0	1	169	0	0	652	0	40,497
									323
Finished Petroleum Products .....	3,698	3,873,480	365,396	55,062	0	0	0	154,478	4,143,158
Finished Motor Gasoline .....	667	1,915,711	76,104	14,710	0	0	0	2,902	2,034,289
Finished Leaded Motor Gasoline .....	452	861,813	40,220	8,383	0	0	0	2,902	93,772
Finished Unleaded Motor Gasoline .....	215	1,053,898	35,884	6,327	0	0	0	1,096,324	94,055
Finished Aviation Gasoline .....	1,021	6,888	212	-127	0	0	0	0	7,994
Naphtha-Type Jet Fuel .....	0	62,268	0	1,065	0	0	0	201	63,132
Kerosene-Type Jet Fuel .....	1	248,609	8,555	-5,267	0	0	0	1,123	250,775
Kerosene .....	34	32,138	2,306	585	0	0	0	292	37,268
Distillate Fuel Oil .....	11	736,907	49,400	22,294	0	0	0	20,112	34,771
Residual Fuel Oil .....	0	255,823	208,267	16,809	0	0	0	788,500	10,207
Naphtha < 400 Deg. for Petro. Feed Use .....	0	42,994	3,710	55	0	0	0	58,128	422,771
Other Oils > 400 Deg. for Petro. Feed Use .....	0	79,015	181	254	0	0	0	1,491	51,420
Special Naphthas .....	979	16,810	6,356	-10	0	0	0	4,446	45,268
Lubricants .....	0	43,892	2,447	2,545	0	0	0	949	1,912
Waxes .....	0	4,531	243	41	0	0	0	0	5,550
Petroleum Coke .....	0	125,973	0	1,171	0	0	0	59,173	67,971
Asphalt and Road Oil .....	0	118,333	2,384	919	0	0	0	242	121,404
Still Gas .....	0	166,592	0	0	0	0	0	0	16,350
Miscellaneous Products .....	985	16,996	5,221	18	0	0	0	301	0
								22,918	1,901
Total .....	3,124,138	3,972,444	1,511,153	-49,861	58,106	446	3,827,134	229,672	4,558,729

<sup>1</sup> Unaccounted for crude oil is a balancing item.

(s) Less than 500 barrels.

E = Estimated.

Note: Total may not equal sum of components due to independent rounding.  
Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

**Table 4. Daily Average Supply and Disposition of Crude Oil and Petroleum Products, October 1983**  
 (Thousands Barrels per Day)

Commodity	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Crude Losses	Disposition			Products Supplied
							Supply	Refinery Inputs	Exports	
<b>Crude Oil (including lease condensate)</b>										
Natural Gas Liquids and LRGs .....	E 8,654	0	3,446	-180	69	1	11,784	140	63	
Natural Gasoline and Isopentane .....	1,593	344	177	-117	0	0	467	32	1,498	
Unfractionated Stream .....	155	0	9	20	0	0	173	0	11	
Plant Condensate .....	76	0	0	-76	0	0	0	0	0	
Liquefied Petroleum Gases .....	18	0	8	(s)	0	0	26	0	0	(s)
Ethane .....	1,344	344	160	-61	0	0	268	32	1,487	
Propane .....	281	20	18	-40	0	0	2	(s)	277	
Butane .....	467	265	39	23	0	0	5	17	773	
Butane-Propane Mixtures .....	214	53	64	-15	0	0	174	15	127	
Ethane-Propane Mixtures .....	5	4	20	-1	0	0	10	0	19	
Isobutanes .....	277	0	18	-3	0	0	0	0	292	(s)
Other Liquids .....	100	2	0	-25	0	0	77	0	0	
Other Hydrocarbons and Alcohol .....	59	0	266	1	0	0	502	0	-176	
Unfinished Oils .....	59	0	0	(s)	0	0	60	0	0	
Motor Gasoline Blending Components .....	0	0	246	17	0	0	307	0	-44	
Aviation Gasoline Blending Components .....	0	0	20	-17	0	0	136	0	-132	
(s)	0	0	0	(s)	0	0	0	0	0	0
Finished Petroleum Products .....	11	12,927	1,367	-340	0	0	0	404	13,561	
Finished Motor Gasoline .....	2	6,186	335	60	0	0	0	2	6,581	
Finished Leaded Motor Gasoline .....	1	2,732	123	27	0	0	0	2	2,882	
Finished Unleaded Motor Gasoline .....	1	3,454	211	33	0	0	0	0	3,698	
Finished Aviation Gasoline .....	5	22	(s)	3	0	0	0	0	30	
Naphtha-Type Jet Fuel .....	0	161	0	22	0	0	0	(s)	183	
Kerosene-Type Jet Fuel .....	0	847	49	-74	0	0	0	1	822	
Kerosene .....	(s)	137	12	-33	0	0	0	7	109	
Distillate Fuel Oil .....	0	2,682	255	-275	0	0	0	55	2,806	
Residual Fuel Oil .....	0	799	634	-56	0	0	0	153	1,224	
Naphtha < 400 Deg. for Petro. Feed. Use .....	0	142	5	5	0	0	0	0	9	143
Other Oils > 400 Deg. for Petro. Feed. Use .....	0	264	(s)	7	0	0	0	1	7	265
Special Naphthas .....	3	63	30	-10	0	0	0	2	0	84
Lubricants .....	0	159	13	10	0	0	0	16	0	167
Waxes .....	0	16	(s)	0	0	0	0	1	0	15
Petroleum Coke .....	0	421	0	-23	0	0	0	152	0	246
Asphalt and Road Oil .....	0	430	8	25	0	0	0	(s)	0	463
Still Gas .....	0	548	0	0	0	0	0	0	0	548
Miscellaneous Products .....	1	51	27	-1	0	0	0	1	77	77
Total .....	10,317	13,271	5,256	-636	69	1	12,754	576	14,947	

<sup>1</sup> Unaccounted for crude oil is a balancing item.  
 (s) Less than 500 barrels.

E =Estimated.

Note: Total may not equal sum of components due to independent rounding.  
 Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

**Table 5. Year-to-Date Average Supply and Disposition of Crude Oil and Petroleum Products, January - October 1983**  
 (Thousand Barrels per Day)

Commodity	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Supply			Disposition			Products Supplied
					Crude Losses	Unaccounted For Crude Oil <sup>1</sup>	Refinery Inputs	Exports			
<b>Crude Oil (including lease condensate)</b>	<b>E 8,663</b>	<b>0</b>	<b>3,311</b>	<b>-245</b>	<b>191</b>	<b>1</b>	<b>11,665</b>	<b>169</b>	<b>65</b>	<b>65</b>	
<b>Natural Gas Liquids and LRGs</b>	<b>1,547</b>	<b>326</b>	<b>199</b>	<b>-82</b>	<b>0</b>	<b>0</b>	<b>443</b>	<b>78</b>	<b>1,469</b>	<b>71</b>	
Natural Gasoline and Isopentane	247	0	7	-1	0	0	182	0	0	0	
Unfractionated Stream	26	0	0	-25	0	0	1	0	0	0	
Plant Condensate	21	0	7	3	0	0	31	0	0	(s)	
Liquefied Petroleum Gases	1,254	325	185	-59	0	0	230	78	1,398	309	
Ethane	255	16	44	-4	0	0	3	4	47	688	
Propane	440	267	42	-11	0	0	132	31	92	20	
Butane	204	38	46	-32	0	0	8	0	0	287	
Butane-Propane Mixtures	5	4	18	1	0	0	0	0	0	0	
Ethane-Propane Mixtures	257	0	35	-5	0	0	(s)	0	0	2	
Isobutane	93	1	0	-8	0	0	83	0	0	2	
<b>Other Liquids</b>	<b>54</b>	<b>0</b>	<b>259</b>	<b>-18</b>	<b>0</b>	<b>0</b>	<b>461</b>	<b>0</b>	<b>-166</b>	<b>0</b>	
Other Hydrocarbons and Alcohol	54	0	0	(s)	0	0	54	0	0	0	
Unfinished Oils	0	0	228	-23	0	0	288	0	-82	0	
Motor Gasoline Blending Components	0	0	31	4	0	0	118	0	-82	0	
Aviation Gasoline Blending Components	0	0	(s)	1	0	0	2	0	-2	0	
<b>Finished Petroleum Products</b>	<b>12</b>	<b>12,742</b>	<b>1,202</b>	<b>181</b>	<b>0</b>	<b>0</b>	<b>508</b>	<b>13,629</b>	<b>10</b>	<b>6,593</b>	
Finished Motor Gasoline	2	6,302	250	48	0	0	0	10	0	2,987	
Finished Leaded Motor Gasoline	1	2,835	132	28	0	0	0	0	0	3,606	
Finished Unleaded Motor Gasoline	1	3,467	118	21	(s)	0	0	0	0	26	
Finished Aviation Gasoline	3	23	1	0	0	0	0	0	1	208	
Naphtha-Type Jet Fuel	0	205	0	4	0	0	0	0	4	825	
Kerosene-Type Jet Fuel	0	818	28	-17	0	0	0	0	1	114	
Kerosene	(s)	106	8	2	0	0	0	0	0	2,594	
Distilled Fuel Oil	(s)	2,424	163	73	0	0	0	0	0	1,391	
Residual Fuel Oil	0	842	685	55	0	0	0	0	5	149	
Naphtha < 400 Deg. for Petro. Feed. Use	0	141	12	(s)	0	0	0	0	15	247	
Other Oils > 400 Deg. for Petro. Feed. Use	0	260	1	1	(s)	0	0	0	3	76	
Special Naphthas	3	55	21	(s)	0	0	0	0	16	145	
Lubricants	0	144	8	0	0	0	0	0	1	15	
Waxes	0	15	1	(s)	0	0	0	0	0	224	
Petroleum Coke	0	414	0	4	0	0	0	0	195	399	
Asphalt and Road Oil	0	389	8	3	0	0	0	0	0	548	
Still Gas	0	548	0	0	0	0	0	0	0	75	
Miscellaneous Products	3	56	17	(s)	0	0	0	0	1	75	
<b>Total</b>	<b>10,277</b>	<b>13,067</b>	<b>4,971</b>	<b>-164</b>	<b>191</b>	<b>1</b>	<b>12,589</b>	<b>755</b>	<b>14,995</b>		

<sup>1</sup> Unaccounted for crude oil is a balancing item.

(s) Less than 500 barrels.

E =Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 6. PAD District I, Supply and Disposition of Crude Oil and Petroleum Products, October 1983  
(Thousands Barrels)

Commodity	Field Production	Refinery Production	Imports	Supply			Disposition			Ending Stocks
				Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Net Receipts	Crude Losses	Refinery Inputs	Exports	
Crude Oil (including lease condensate)	E 2,350	0	23,780	588	-378	4,285	1	30,624	0	0
Natural Gas Liquids and LRGs	836	940	451	-207	0	2,511	0	133	34	4,364
Liquefied Petroleum Gases	702	940	327	-267	0	2,511	0	32	34	6,166
Other Products <sup>2</sup>	134	0	124	60	0	0	101	0	217	6,131
Other Liquids	68	0	4,021	737	0	232	0	4,488	0	570
Other Hydrocarbons and Alcohol	68	0	0	38	0	0	106	0	0	125
Unfinished Oils	0	0	3,752	-49	0	232	0	3,003	0	912
Motor Gasoline Blending Components	0	0	289	753	0	0	0	1,384	0	-342
Aviation Gasoline Blending Components	0	0	0	-5	0	0	-5	0	0	12
Finished Petroleum Products	43	35,727	36,241	-10,086	0	78,381	0	0	365	139,941
Finished Motor Gasoline	43	16,484	9,178	1,591	0	42,406	0	0	0	69,650
Finished Leaded Motor Gasoline	25	6,080	2,958	1,569	0	15,455	0	0	32	28,467
Finished Unleaded Motor Gasoline	18	10,384	6,250	22	0	26,951	0	0	0	43,625
Finished Aviation Gasoline	0	22	(s)	1	0	161	0	0	0	28,633
Naphtha-Type Jet Fuel	0	310	0	41	0	313	0	0	(s)	449
Kerosene-Type Jet Fuel	0	769	1,453	-1,082	0	9,563	0	0	664	605
Kerosene	0	33	330	-783	0	807	0	0	0	10,059
Distillate Fuel Oil	0	8,609	7,515	-7,108	0	16,040	0	0	2	385
Residual Fuel Oil	0	2,423	17,100	-1,767	0	7,722	0	0	100	24,956
Naphtha and Other Oils for Petro. Feed.	0	319	12	-2	0	25	0	0	(s)	74,614
Special Naphthas	0	26	9	-154	0	229	0	0	49	25,478
Lubricants	0	674	376	96	0	612	0	0	5	25,296
Waxes	0	97	6	-4	0	10	0	0	5	39
Petroleum Coke	0	1,190	0	-175	0	0	0	0	30	985
Asphalt and Road Oil	0	2,988	259	-800	0	319	0	0	2	1,092
Still Gas	0	1,673	0	0	0	0	0	0	2,763	5,119
Miscellaneous Products	0	130	3	60	0	174	0	0	0	0
Total	3,297	36,667	64,493	-8,968	-378	85,409	1	35,245	400	144,875
										224,750

<sup>1</sup> Unaccounted for crude oil is a balancing item.

<sup>2</sup> Includes natural gasoline, isopentane, unfractionated stream, and plant condensate.

(s) Less than 500 barrels.

E Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 7. PAD District II, Supply and Disposition of Crude Oil and Petroleum Products, October 1983  
(Thousand Barrels)

Commodity	Field Production	Refinery Production	Supply				Disposition				Ending Stocks
			Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Net Receipts	Crude Losses	Refinery Inputs	Exports	Products Supplied	
Crude Oil (including lease condensate)	E 32,389	0	14,247	2,665	33,602	1,793	6	84,349	341	0	74,291
Natural Gas Liquids and LRGs	9,348	2,298	2,928	405	0	3,965	0	4,909	302	13,733	43,034
Liquefied Petroleum Gases	9,245	2,298	2,928	1,162	0	2,441	0	3,286	302	14,486	37,340
Other Products <sup>2</sup>	103	0	0	-757	0	1,524	0	1,623	0	-753	5,694
Other Liquids											
Other Hydrocarbons and Alcohol	405	0	193	-2,324	0	824	0	-323	0	-579	26,068
Unfinished Oils	405	0	193	-34	0	0	0	371	0	0	136
Motor Gasoline Blending Components	0	0	0	-2,232	0	-267	0	-2,112	0	-194	18,285
Aviation Gasoline Blending Components	0	0	0	-68	0	1,091	0	1,408	0	-385	7,537
Finished Petroleum Products	6	90,174	1,266	-1,544	0	22,859	0	0	141	112,620	124,638
Finished Motor Gasoline	0	50,016	71	518	0	13,323	0	0	7	63,921	57,724
Finished Leaded Motor Gasoline	0	24,343	56	-23	0	6,868	0	0	7	31,237	28,913
Finished Unleaded Motor Gasoline	0	25,673	15	541	0	6,455	0	0	0	32,684	28,811
Finished Aviation Gasoline	0	71	0	94	0	228	0	0	0	0	393
Naphtha-Type Jet Fuel	0	949	0	-389	0	200	0	0	0	0	1,753
Keroene-Type Jet Fuel	0	4,239	0	-493	0	1,316	0	0	0	0	5,062
Kerosene	0	739	0	-291	0	38	0	0	1	485	2,390
Distillate Fuel Oil	0	19,474	136	-1,650	0	6,797	0	0	(s)	24,757	40,771
Residual Fuel Oil	0	2,006	298	-357	0	-65	0	0	0	1,882	3,819
Naphtha and Other Oils for Petro. Feed.	0	754	14	14	0	26	0	0	45	764	213
Special Naphthas	0	551	159	-112	0	163	0	0	1	760	662
Lubricants	0	884	11	-58	0	410	0	0	21	1,226	1,981
Waxes	0	54	2	-4	0	0	0	0	(s)	52	77
Petroleum Coke	0	3,186	0	56	0	0	0	0	63	3,179	667
Asphalt and Road Oil	0	3,571	3	1,113	0	601	0	0	1	5,287	5,804
Still Gas	0	3,532	0	0	0	0	0	0	0	3,532	0
Miscellaneous Products	6	148	571	15	0	-178	0	0	2	561	214
Total	42,148	92,472	18,633	-798	33,602	29,441	6	88,935	783	125,774	268,031

<sup>1</sup> Unaccounted for crude oil is a balancing item.

<sup>2</sup> Includes natural gasoline, isopentane, unfractionated stream, and plant condensate.

(s) Less than 500 barrels.

E Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

**Table 8. PAD District III, Supply and Disposition of Crude Oil and Petroleum Products, October 1983  
(Thousand Barrels)**

Commodity	Field Production	Refinery Production	Imports	Supply Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Net Receipts	Disposition			Ending Stocks	
							Crude Losses	Refinery Inputs	Exports		
Crude Oil (including lease condensate)	E 128,517	0	62,163	-9,637	-21,427	12,361	0	171,948	0	29	532,180
Natural Gas Liquids and LPGs	35,600	6,272	1,245	-3,755	0	-5,182	0	8,137	550	25,593	85,297
Liquefied Petroleum Gases	30,150	6,272	965	-2,733	0	-4,830	0	4,117	550	25,159	73,150
Other Products <sup>2</sup>	5,450	0	278	-1,022	0	-352	0	4,020	0	0	334
Other Liquids	862	0	3,749	2,558	0	-1,344	0	12,490	0	-6,565	70,325
Other Hydrocarbons and Alcohol	862	0	0	6	0	0	0	968	0	0	117
Unfinished Oils	0	0	3,581	3,612	0	-253	0	9,773	0	-2,833	51,106
Motor Gasoline Blending Components	0	0	168	-1,043	0	-1,091	0	1,866	0	-3,632	16,927
Aviation Gasoline Blending Components	0	0	0	-17	0	0	-17	0	0	0	175
Finished Petroleum Products	278	193,263	3,131	-1,624	0	-103,880	0	0	5,746	85,422	131,103
Finished Motor Gasoline	0	89,232	533	-1,959	0	-57,462	0	0	0	30,344	49,044
Finished Leaded Motor Gasoline	0	36,890	533	-927	0	-23,233	0	0	0	13,283	24,415
Finished Unleaded Motor Gasoline	0	52,342	0	-1,032	0	-34,229	0	0	0	0	17,081
Finished Aviation Gasoline	159	393	0	-1	0	-406	0	0	0	145	837
Naphtha-Type Jet Fuel	0	2,049	0	792	0	-514	0	0	0	2,327	1,772
Kerosene-Type Jet Fuel	0	13,629	3	-686	0	-11,372	0	0	0	12,304	1,574
Kerosene	4	3,156	28	154	0	-845	0	0	0	216	2,281
Distillate Fuel Oil	0	40,243	8	51	0	-23,092	0	0	0	211	17,000
Residual Fuel Oil	0	10,953	1,444	254	0	-7,657	0	0	1,849	3,145	13,569
Naphtha and Other Oils for Petro. Feed	0	10,974	129	162	0	-51	0	0	0	381	10,832
Special Naphthas	81	1,315	734	-94	0	-392	0	0	0	39	1,684
Lubricants	0	2,978	7	284	0	-1,163	0	0	287	1,619	4,463
Waxes	0	256	(s)	8	0	-10	0	0	24	230	456
Petroleum Coke	0	5,444	0	-558	0	0	0	0	2,732	2,154	1,509
Asphalt and Road Oil	0	3,787	0	91	0	-920	0	0	(s)	2,958	3,574
Still Gas	0	7,820	0	0	0	0	0	0	0	7,820	0
Miscellaneous Products	34	1,034	245	-122	0	4	0	0	6	1,189	1,104
Total	165,257	199,535	70,287	-12,458	-21,427	-98,045	0	192,575	6,295	104,279	818,905

<sup>1</sup> Unaccounted for crude oil is a balancing item.

<sup>2</sup> Includes natural gasoline, isopentane, unfractionated stream, and plant condensate.  
(s) Less than 500 barrels.

E Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

**Table 9. PAD District IV, Supply and Disposition of Crude Oil and Petroleum Products, October 1983**  
 (Thousand Barrels)

Commodity	Field Production	Refinery Production	Imports	Supply Stock With- drawal (+) or Addi- tion (-)	Unac- counted For Crude Oil <sup>1</sup>	Net Receipts	Disposition			Products Supplied
							Crude Losses	Refinery Inputs	Exports	
Crude Oil (including lease condensate)	E 16,821	0	1,345	-68	-4,380	0	0	13,712	0	6
Natural Gas Liquids and LRGs	2,548	70	587	-28	0	-1,294	0	515	0	1,368
Liquefied Petroleum Gases	935	70	465	-15	0	-122	0	363	0	970
Other Products <sup>2</sup>	1,613	0	122	-13	0	-1,172	0	152	0	398
Other Liquids	0	0	93	-721	0	0	0	-1,185	0	557
Other Hydrocarbons and Alcohol	0	0	0	0	0	0	0	0	0	0
Unfinished Oils	0	0	93	-680	0	0	0	-1,188	0	601
Motor Gasoline Blending Components	0	0	0	-41	0	0	0	3	0	1,622
Aviation Gasoline Blending Components	0	0	0	0	0	0	0	0	0	0
Finished Petroleum Products	7	13,143	341	-92	0	800	0	0	2	14,197
Finished Motor Gasoline	4	6,479	161	-362	0	735	0	0	0	9,436
Finished Leaded Motor Gasoline	4	4,096	132	-271	0	297	0	0	0	4,665
Finished Unleaded Motor Gasoline	0	2,383	29	-91	0	438	0	0	0	2,918
Finished Aviation Gasoline	0	30	0	-23	0	17	0	0	0	2,759
Naphtha-Type Jet Fuel	0	393	0	-34	0	-115	0	0	0	1,747
Kerosene	0	611	0	-52	0	371	0	0	0	60
Distillate Fuel Oil	0	24	0	3	0	0	0	0	0	24
Residual Fuel Oil	0	3,724	141	53	0	-208	0	0	0	244
Naphtha and Other Oils for Petro. Feed	0	298	39	22	0	0	0	0	0	351
Special Naphthas	0	1	0	-1	0	0	0	0	0	930
Lubricants	0	27	(s)	-1	0	0	0	0	0	766
Waxes	0	10	0	0	0	0	0	0	0	27
Petroleum Coke	0	278	0	15	0	0	0	0	0	3,710
Asphalt and Road Oil	0	715	0	287	0	0	0	0	0	2,632
Still Gas	0	507	0	0	0	0	0	0	0	452
Miscellaneous Products	3	45	(s)	0	0	0	0	0	0	359
Total	19,376	13,213	2,367	-909	-4,380	-494	0	13,042	2	16,129
										28,261

<sup>1</sup> Unaccounted for crude oil is a balancing item.

<sup>2</sup> Includes natural gasoline, isopentane, unfractionated stream, and plant condensate.

(s) Less than 500 barrels.

E Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

**Table 10. PAD District V, Supply and Disposition of Crude Oil and Petroleum Products, October 1983**  
 (Thousand Barrels)

Commodity	Field Production	Refinery Production	Imports	Supply	Disposition				Ending Stocks
					Stock Withdrawal (+) or Addition (-)	Uncounted For Crude Oil <sup>1</sup>	Net Receipts	Crude Losses	
Crude Oil (including lease condensate) .....	E 88,189	0	5,286	862	-5,267	-18,439	23	64,681	3,995
Natural Gas Liquids and LRGs .....	1,054	1,082	282	-47	0	0	781	101	1,489
Liquefied Petroleum Gases .....	623	1,082	282	-40	0	0	509	101	3,600
Other Products <sup>2</sup> .....	431	0	0	-7	0	0	272	0	1,337
Other Liquids .....	501	0	193	-222	0	288	0	102	0
Other Hydrocarbons and Alcohol .....	501	0	0	-4	0	0	505	0	3,554
Unfinished Oils .....	0	0	29	-126	0	288	0	30	0
Motor Gasoline Blending Components .....	0	0	164	-114	0	0	0	-447	152
Aviation Gasoline Blending Components .....	0	0	0	-14	0	0	0	14	46
Finished Petroleum Products .....	0	68,445	1,403	2,811	0	1,840	0	0	658
Finished Motor Gasoline .....	0	29,580	437	2,064	0	998	0	0	31,648
Finished Leaded Motor Gasoline .....	0	13,295	177	490	0	613	0	0	12
Finished Unleaded Motor Gasoline .....	0	16,285	260	1,574	0	385	0	0	18,860
Finished Aviation Gasoline .....	0	163	0	31	0	0	0	0	0
Naphtha-Type Jet Fuel .....	0	1,295	0	271	0	116	0	0	1,611
Kerosene-Type Jet Fuel .....	0	6,999	78	30	0	122	0	0	7,205
Distillate Fuel Oil .....	0	298	(s)	-96	0	0	0	0	6,135
Residual Fuel Oil .....	0	11,081	98	117	0	463	0	0	12
Naphtha and Other Oils for Petro. Feed .....	0	9,089	765	119	0	0	0	0	14,563
Special Naphthas .....	0	523	0	212	0	0	0	0	9,059
Lubricants .....	0	73	14	40	0	0	0	0	10,235
Waxes .....	0	371	(s)	-3	0	141	0	0	18,504
Petroleum Coke .....	0	68	2	1	0	0	0	0	536
Asphalt and Road Oil .....	0	2,950	0	-58	0	0	0	0	1,94
Still Gas .....	0	2,274	0	77	0	0	0	0	1,682
Miscellaneous Products .....	0	3,468	0	0	0	0	0	0	1,645
Total .....	89,744	69,527	7,163	3,404	-5,267	-16,311	23	65,564	10,373
								72,300	171,931

<sup>1</sup> Unaccounted for crude oil is a balancing item.

<sup>2</sup> Includes natural gasoline, isopentane, unfractionated stream, and plant condensate.

(s) Less than 500 barrels.

E Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

**Table 11. Production of Crude Oil (including Lease Condensate) by PAD District and State, for the Most Currently Available Month,<sup>1</sup> August 1983  
(Thousand Barrels)**

—Continued

PAD District and State		Production	Total	Daily Average	PAD District and State		Production	Total	Daily Average
<b>PAD District I</b>					<b>PAD District IV</b>				
Florida		1,581	51		Colorado		2,419	78	
New York		E 71	E 2		Montana		2,468	80	
Pennsylvania		E 364	E 12		Utah		E 2,446	E 79	
Virginia		E 4	E 0		Wyoming		E 9,607	E 310	
West Virginia		338	11		Adjustment 2		225	7	
Adjustment 2		100	3		<b>Total PAD District IV</b>		E 17,165	E 554	
<b>Total PAD District I</b>		E 2,458	E 79						
<b>PAD District II</b>					<b>PAD District V</b>				
Illinois		2,460	79		Alaska		2,015	65	
Indiana		485	16		South Alaska		50,600	1,632	
Kansas		6,344	205		North Slope		466	15	
Kentucky		678	22		Adjustment for Alaska <sup>2</sup>		53,081	1,712	
Michigan		E 2,487	E 80		Total Alaska		20	1	
Missouri		E 177	E 1		Arizona				
Nebraska		545	18		California		6,369	205	
North Dakota		4,204	136		Central Coastal		21,502	694	
Ohio		E 1,288	E 40		East Central		21,15	(S)	
Oklahoma		13,985	451		North		6,561	212	
South Dakota		103	3		South		34,447	1,111	
Tennessee		94	3		Total California		57	2	
Adjustment 2		-171	-6		Nevada		29	1	
<b>Total PAD District II</b>		E 32,479	E 1,048		Adjustment for Arizona, California, and Nevada <sup>2</sup>		87,634	2,827	
<b>PAD District III</b>					<b>Total PAD District V</b>				
Alabama		1,592	51		<b>United States Total</b>		E 268,234	E 8,653	
Arkansas		E 1,601	E 52						
Louisiana		E 37,449	E 1,208						
Gulf Coast		2,832	91						
Rest Of State		E 40,231	E 1,299						
Total Louisiana		2,671	86						
Mississippi									
New Mexico		555	18						
Northwestern		5,847	189						
Southeastern		6,402	207						
Total New Mexico									
Texas		2,090	67						
TRRC District 01		3,396	110						
TRRC District 02		E 10,305	E 332						
TRRC District 03		2,547	76						
TRRC District 04		776	25						
TRRC District 05, excluding East Texas		3,490	113						
TRRC District 06		2,876	93						
TRRC District 07B		2,897	93						
TRRC District 08		19,379	625						
TRRC District 08A		19,009	613						
TRRC District 09		3,218	104						
TRRC District 10		1,767	57						
East Texas		4,304	139						
Total Texas		E 75,854	E 2,447						
Adjustment 2		97	3						
<b>Total PAD District III</b>		E 128,498	E 4,145						

See footnotes at end of table.

<sup>1</sup> Includes the following offshore production (thousands of barrels):

Alaska: 2,000;

California: Federal- 2,621, State- 3,100;  
Louisiana: Federal- E 24,900, State- 2,209;  
Texas: Federal- E 1,653, State- 216;  
U.S. Total: E 36,639.

<sup>2</sup> These adjustments are used to reconcile the national and PADD level sums of the State data with the independently estimated U.S. and Alaskan figures shown in the Summary Statistics portion of this issue and with the PADD level figures published in a previous issue. Final data at the State, PAD District and national levels will be published without adjustments in the Petroleum Supply Annual.

(S) Less than 500 barrels.

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.

— Data not available.

E = Estimated.

Table 12. Natural Gas Processing Plant Production of Petroleum Products by PAD District,<sup>1</sup> October 1983  
(Thousand Barrels)

Commodity	PAD District I			PAD District II			PAD District III			PAD District IV			PAD District V			United States Coast	
	PAD East Coast	Appala-chian #1	Total	Appala-chian #2	Ind., Ill., Ky.	Total	Texas Inland	Texas Gulf Coast	La., Ark.	New Mexico	Total	Texas Gulf Coast	Rocky Mt.	West Coast			
Natural Gas Liquids .....	414	422	836	1	1,696	499	7,152	9,348	20,408	3,193	7,458	730	3,811	35,600	2,548	1,054	49,386
Natural Gasoline and Isopentane .....	48	45	93	0	71	72	1,431	1,574	1,558	-1,013	1,320	123	376	2,364	347	436	4,814
Unfractionated Stream .....	0	41	41	1	635	109	-2,312	-1,567	11,631	-11,867	379	67	2,355	2,785	1,126	-5	2,360
Plant Condensate .....	0	0	0	0	19	27	50	96	197	70	32	18	4	321	140	0	557
Liquefied Petroleum Gases .....	366	336	702	0	971	291	7,933	9,245	7,022	15,803	5,727	522	1,076	30,150	935	623	41,655
Ethane .....	114	177	281	0	451	0	1,032	1,483	944	3,881	1,960	34	101	6,920	18	0	8,712
Propane .....	149	105	254	0	392	183	2,813	3,388	2,693	4,710	1,779	169	475	9,826	649	364	14,481
Butane .....	86	36	122	0	76	96	1,157	1,329	956	2,612	676	204	249	4,697	263	214	6,625
Butane-Propane Mixtures .....	0	0	0	0	0	0	0	5	57	45	1	13	0	116	0	35	156
Ethane-Propane Mixtures .....	0	0	0	0	0	0	2,506	2,506	2,109	3,072	722	2	164	6,069	0	0	8,575
Isobutane .....	17	18	35	0	52	12	470	534	263	1,483	589	100	87	2,522	5	10	3,106
Finished Petroleum Products .....	43	0	43	0	1	0	5	6	264	7	0	5	2	278	7	0	334
Finished Motor Gasoline .....	43	0	43	0	0	0	0	0	0	0	0	0	0	4	0	47	0
Finished Leaded Motor Gasoline .....	25	0	25	0	0	0	0	0	0	0	0	0	0	0	4	0	29
Finished Unleaded Motor Gasoline .....	18	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	18
Finished Aviation Gasoline .....	0	0	0	0	0	0	0	0	159	0	0	0	0	159	0	0	159
Naphtha-Type Jet Fuel .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kerosene-Type Jet Fuel .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kerosene .....	0	0	0	0	0	0	0	0	1	0	0	1	2	4	0	0	4
Distillate Fuel Oil .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Special Naphthas .....	0	0	0	0	0	0	0	0	81	0	0	0	0	81	0	0	81
Miscellaneous Products .....	0	0	0	0	1	0	5	6	23	7	0	4	0	34	3	0	43
<b>Total Production .....</b>	<b>457</b>	<b>422</b>	<b>879</b>	<b>1</b>	<b>1,697</b>	<b>499</b>	<b>7,157</b>	<b>9,354</b>	<b>20,672</b>	<b>3,200</b>	<b>7,458</b>	<b>735</b>	<b>3,813</b>	<b>35,878</b>	<b>2,555</b>	<b>1,054</b>	<b>49,720</b>

<sup>1</sup> Production represents quantity of natural gas processing plant output less input to fractionating facilities.  
Source: See Explanatory Notes on Data Collection and Estimation.

**Table 13. Refinery Input of Crude Oil and Petroleum Products by PAD District, October 1983**  
 (Thousand Barrels, Except Where Noted)

Commodity	PAD District I			PAD District II			PAD District III			PAD District IV			PAD District V				
	East Coast	Appalachian Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wis., Dak.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total	Rocky Mt.	West Coast		
Crude Oil (including lease condensate) .....	28,147	2,477	30,624	1,940	56,692	6,868	84,349	14,841	93,093	57,062	5,268	1,684	171,948	13,712	64,681		
Natural Gas Liquids															365,314		
Natural Gasoline and Isopentane .....	101	0	101	0	484	151	908	1,543	1,227	1,618	365	40	101	3,351	102	272	5,369
Unfractionated Stream .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Plant Condensate .....	0	0	0	0	68	0	12	80	0	485	0	183	1	669	50	0	799
Liquefied Petroleum Gases .....	26	6	32	160	1,779	287	1,060	3,286	734	1,641	1,558	146	38	4,117	363	509	8,307
Ethane .....	0	0	0	0	0	0	0	0	0	0	69	0	0	69	0	0	69
Propane .....	0	0	0	0	68	0	0	68	27	0	45	0	0	72	5	4	149
Butane .....	0	6	6	80	977	224	656	1,937	321	1,376	1,243	33	0	2,973	219	268	5,403
Butane-Propane Mixtures .....	0	0	0	0	5	0	0	5	0	83	44	0	15	142	93	62	302
Ethane-Propane Mixtures .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Isobutane .....	26	0	26	80	729	63	404	1,276	386	182	157	113	23	861	46	175	2,384
Other Liquids																	
Other Hydrocarbons and Alcohol .....	106	0	106	0	371	0	0	371	30	535	300	0	3	868	0	505	1,850
Unfinished Oil (net) .....	2,974	29	3,003	34	-2,052	-122	28	-2,112	181	6,657	2,630	300	5	9,773	-1,188	30	9,506
Motor Gasoline Blending																	
Components (net) .....	1,394	-10	1,384	-3	809	-20	622	1,408	-92	-124	2,091	-26	17	1,866	3	-447	4,214
Aviation Gasoline Blending																	
Components (net) .....	-5	0	-5	0	11	0	-1	10	0	2	-19	0	0	-17	0	14	2
Total Input to Refineries .....	32,743	2,502	35,245	2,131	58,162	7,164	21,478	88,935	16,921	103,907	63,987	5,911	1,849	192,575	13,042	65,564	395,361
Crude Oil Distillation																	
Gross Input (daily average) .....	935	80	1,014	69	1,845	232	610	2,756	487	3,078	1,854	171	55	5,645	444	2,114	11,974
Operable Capacity (daily average) .....	1,473	174	1,647	66	2,351	295	814	3,526	611	3,903	2,547	295	107	7,463	559	3,118	16,313
Operating Ratio (percent) .....	63.5	45.9	61.6	104.3	78.5	78.6	75.0	.78.2	.79.7	.78.9	.72.8	.58.0	.51.0	.75.6	.79.5	.67.8	.73.4
Crude Oil Qualities																	
Sulfur Content, Weighted Average (percent) .....	1.02	.36	.96	.67	.93	1.47	.57	.88	.63	1.00	.99	1.50	.53	.98	.92	.98	.95
API Gravity, Weighted Average .....	31.02	40.93	31.88	36.21	35.34	32.00	37.79	35.64	37.55	34.61	33.89	31.93	33.82	34.60	35.55	25.64	33.02
Operable Capacity (daily average) .....	1,473	174	1,647	66	2,351	295	814	3,526	611	3,903	2,547	295	107	7,463	559	3,118	16,313
Operating .....	1,329	110	1,439	66	2,189	253	722	3,230	557	3,579	2,109	227	107	6,580	528	2,850	14,627
Idle .....	143	64	208	0	161	42	92	296	53	324	439	68	0	884	31	268	1,687

<sup>1</sup> Represents gross input divided by operable capacity.  
 Note: Total may not equal sum of components due to independent rounding.  
 Source: See Explanatory Notes on Data Collection and Estimation.

Table 14. Refinery Production of Petroleum Products by PAD District, October 1983  
(Thousand Barrels)

Commodity	PAD District I				PAD District II				PAD District III				PAD District IV				PAD District V			
	East Coast	Appalachian Coast #1	Total	Appalachian #2	Ind., Ill., Ky.	Winn., Wis., Dak.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La., Gulf Coast	No. La., Ark.	New Mexico	Total	Rocky Mt.	West Coast	United States			
Liquefied Refinery Gases .....	921	19	940	40	1,604	306	348	2,298	273	3,031	2,822	83	63	6,272	70	1,082	10,662			
For Petrochemical Feedstock Use .....	270	0	270	0	215	7	44	266	41	1,583	1,568	19	0	3,221	11	144	3,912			
For Other Uses .....	651	19	670	40	1,389	299	304	2,032	232	1,498	1,254	64	63	3,051	59	938	6,750			
Ethane .....	0	0	0	0	0	0	0	0	21	0	602	2	0	0	604	0	0	625		
For Petrochemical Feedstock Use .....	0	0	0	0	0	0	0	0	0	0	443	2	0	0	445	0	0	445		
Propane .....	792	19	811	40	1,570	278	478	2,366	210	2,389	1,403	52	27	4,061	165	813	8,216			
For Petrochemical Feedstock Use .....	229	0	229	0	190	0	44	234	41	917	226	0	0	1,184	0	104	1,751			
Butane .....	563	19	582	40	1,380	278	434	2,132	169	1,452	1,177	52	27	2,877	165	709	6,465			
For Petrochemical Feedstock Use .....	129	0	129	0	13	7	-130	-110	61	-46	1,415	30	20	1,480	-83	227	1,643			
For Other Uses .....	41	0	41	0	0	7	0	7	0	217	1,340	19	0	1,576	1	40	1,665			
Butane-Propane Mixtures .....	88	0	88	0	13	0	-130	-117	61	-263	75	11	20	-96	-84	187	-22			
For Petrochemical Feedstock Use .....	0	0	0	0	4	0	0	0	-4	2	90	2	1	16	111	-22	42			
For Other Uses .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Isobutane for Petro. Feed. Use .....	0	0	0	0	0	0	-4	0	0	-4	2	90	2	1	16	111	-22			
Finished Motor Gasoline .....	15,555	909	16,464	1,203	32,655	3,782	12,356	50,016	9,065	46,218	31,339	1,750	850	89,232	6,479	29,580	191,771			
Finished Leaded Motor Gasoline .....	5,669	411	6,080	615	14,369	2,148	7,211	24,373	4,822	17,449	13,408	698	513	36,890	4,096	13,295	84,704			
Finished Unleaded Motor Gasoline .....	9,886	498	10,384	568	18,266	1,634	5,185	25,673	4,243	28,769	17,931	1,052	347	52,342	2,383	16,285	107,067			
Finishe Aviation Gasoline .....	22	0	22	0	62	0	9	71	18	231	144	0	0	393	30	163	679			
Naphtha-Type Jet Fuel .....	267	43	310	62	494	80	313	949	620	810	232	174	213	2,049	393	1,295	4,936			
Kerosene-Type Jet Fuel .....	769	0	769	30	3,285	252	672	4,239	627	7,224	5,753	1	24	13,629	611	6,999	26,247			
Kerosene .....	-27	60	33	60	725	48	-94	739	-3	1,547	1,578	23	11	3,156	24	298	4,250			
Distillate Fuel Oil .....	7,891	718	8,609	520	11,545	1,870	5,539	19,474	3,643	22,398	11,966	1,657	579	40,243	3,724	11,081	83,131			
Residual Fuel Oil .....	2,302	121	2,423	75	1,494	254	183	2,006	563	6,678	3,416	260	36	10,953	298	9,089	24,769			
Naphtha < 400 Deg. For Petro. Feed. Use .....	315	0	315	0	508	0	85	593	489	2,588	196	103	0	3,376	0	112	4,396			
Other Oils > 400 Deg. For Petro. Feed. Use .....	4	0	4	0	155	0	6	161	190	5,442	1,966	0	0	7,598	1	411	8,175			
Special Naphthas .....	5	21	26	0	342	0	208	551	25	1,075	80	135	0	1,315	1	73	1,966			
Lubricants .....	331	343	674	0	501	0	383	884	18	1,825	787	348	0	2,978	27	371	4,934			
Waxes .....	25	72	97	0	11	0	43	54	4	110	81	61	0	256	10	68	485			
Petroleum Coke .....	1,172	18	1,190	22	2,247	297	620	3,186	301	2,778	2,252	102	11	5,444	278	2,950	13,048			
Marketable .....	498	0	498	0	1,255	174	408	1,837	57	1,340	1,526	74	0	2,997	122	2,259	7,713			
Catalyst .....	674	18	692	22	992	123	212	1,349	244	1,438	726	28	11	2,447	156	691	5,335			
Asphalt and Road Oil .....	2,938	50	2,988	128	2,569	346	528	3,571	605	728	1,382	1,034	38	3,787	715	2,274	13,335			
Still Gas .....	1,577	96	1,673	64	2,489	227	752	3,532	464	4,799	2,323	206	28	7,820	507	3,468	17,000			
For Petrochemical Feedstock Use .....	265	0	265	0	2	0	0	2	6	414	83	0	0	503	32	247	1,049			
For Other Uses .....	1,312	96	1,408	64	2,487	227	752	3,530	458	4,385	2,240	206	28	7,317	475	3,221	15,951			
Miscellaneous Products .....	93	37	130	3	74	16	55	148	96	686	233	19	0	1,034	45	213	1,570			
Fuel Use .....	0	1	1	0	1	0	15	16	0	19	103	0	0	122	9	40	188			
Non-Fuel Use .....	93	36	129	3	73	16	40	132	96	667	130	19	0	912	36	173	1,382			
<b>Total Production .....</b>	<b>34,160</b>	<b>2,507</b>	<b>36,667</b>	<b>2,207</b>	<b>60,740</b>	<b>7,478</b>	<b>22,047</b>	<b>92,472</b>	<b>16,998</b>	<b>108,168</b>	<b>66,550</b>	<b>5,956</b>	<b>1,863</b>	<b>199,535</b>	<b>13,213</b>	<b>69,527</b>	<b>411,414</b>			
<b>Processing Gain(+) or Loss(-) .....</b>	<b>-1,417</b>	<b>-5</b>	<b>-1,422</b>	<b>-76</b>	<b>-2,578</b>	<b>-314</b>	<b>-569</b>	<b>-3,537</b>	<b>-77</b>	<b>-4,261</b>	<b>-2,563</b>	<b>-45</b>	<b>-14</b>	<b>-6,960</b>	<b>-171</b>	<b>-3,963</b>	<b>-16,053</b>			

<sup>1</sup> Represents the arithmetic difference between input and output.

Note: See Explanatory Note on negative production.

Source: See Explanatory Notes on Data Collection and Estimation.

**Table 15. Percent Refinery Yield of Petroleum Products by PAD District,<sup>1</sup> October 1983**

Commodity	PAD District I			PAD District II			PAD District III			PAD District IV			PAD District V			United States Coast		
	East Coast	Appala-chian #1	Total	Appala-chian #2	Ind., Ill., Ky.	Minn., Wis., Daks.	Oklahoma, Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La., No. La., Gulf Coast	New Mexico	Total	Rocky Mt.	West Coast			
Finished Motor Gasoline <sup>2</sup>	44.8	36.4	44.1	53.0	53.3	49.9	51.9	52.7	47.7	42.2	45.3	25.3	41.4	43.1	47.6	44.4	45.7	
Finished Aviation Gasoline <sup>3</sup>	.1	.0	.1	.0	.1	.0	.1	.1	.1	.2	.3	.0	.0	.2	.2	.2	.2	
Liquefied Refinery Gases	3.0	.8	2.8	2.0	2.9	4.5	1.8	2.8	1.8	3.0	4.7	1.5	3.7	3.5	.6	1.7	2.8	
Naphtha-Type Jet Fuel	.9	1.7	3.1	.9	1.2	1.7	1.2	4.1	.8	.4	3.1	12.6	1.1	3.1	2.0	1.3		
Kerosene-Type Jet Fuel	2.5	0	2.3	1.5	6.0	3.7	3.6	5.2	4.2	7.2	9.6	.0	1.4	7.5	4.9	10.8	7.0	
Kerosene	-.1	2.4	1.1	3.0	1.3	.7	-.5	.9	.0	1.6	2.6	.4	1.7	.2	.5	1.1		
Distillate Fuel Oil	25.4	28.7	25.6	26.3	21.1	27.7	29.3	23.7	24.3	22.5	20.0	.4	29.8	34.3	22.1	29.7	17.1	22.2
Residual Fuel Oil	7.4	4.8	7.2	3.8	2.7	3.8	1.0	2.4	3.7	6.7	5.7	4.7	2.1	6.0	2.4	14.0	6.6	
Naphtha < 400 Deg. F. Petro. Feed. Use	1.0	0	.9	0	.9	0	.5	.7	3.3	2.6	.3	1.8	0	1.9	0	2	1.2	
Other Oils > 400 Deg. F. Petro. Feed. Use	.0	0	0	.3	0	0	0	.2	1.3	5.5	3.3	0	0	4.2	0	.6	2.2	
Special Naphthas	.0	.8	.1	0	.6	0	1.1	.7	.2	1.1	.1	2.4	0	.7	0	.1	.5	
Lubricants	1.1	13.7	2.0	0	.9	0	2.0	1.1	.1	1.8	1.3	6.3	0	1.6	.2	.6	1.3	
Waxes	-.1	2.9	.3	0	0	0	.2	.1	.0	.1	.1	1.1	0	.1	.1	.1	.1	
Petroleum Coke	3.8	.7	3.5	1.1	4.1	4.4	3.3	3.9	2.0	2.8	3.8	.8	.7	3.0	2.2	4.6	3.5	
Asphalt and Road Oil	9.4	2.0	8.9	6.5	4.7	5.1	2.8	4.3	4.0	2.3	18.6	2.2	2.1	5.7	3.6			
Still Gas	5.1	3.8	5.0	3.2	4.6	3.4	4.0	3.1	4.8	3.9	3.7	1.7	4.3	4.0	5.4	4.5		
Miscellaneous Products	.3	1.5	.4	.2	-.1	.2	.3	.2	.6	.7	.4	.3	0	.6	.4	.3	.4	
Processing Gain(+) or Loss(+) <sup>4</sup>	-.6	-2	-4.2	-3.9	-4.7	-4.7	-3.0	-4.3	-5	-4.3	-4.3	-.8	-.8	-3.8	-1.4	-6.1	-4.3	

<sup>1</sup> Based on crude oil input and net returns of unfinished oils.

<sup>2</sup> Based on total finished motor gasoline output plus net output of motor gasoline blending components, minus input of natural gas plant liquids, other hydrocarbons and alcohol.

<sup>3</sup> Based on finished aviation gasoline output plus net output of aviation gasoline blending components.

<sup>4</sup> Represents the difference between Input and Production.

Note: Totals may not equal sum of components due to independent rounding.

Note: See Explanatory Note on negative production.

Source: See Explanatory Notes on Data Collection and Estimation.

**Table 16. Imports of Crude Oil and Petroleum Products by PAD District, October 1983**  
 (Thousands of Barrels)

Commodity	Petroleum Administration for Defense Districts					Total
	I	II	III	IV	V	
Crude Oil (including lease condensate) 1,2	23,780	14,247	62,163	1,345	5,286	106,820
Natural Gas Liquids						
Natural Gasoline and Isopentane	451	2,928	1,245	587	282	5,493
Plant Condensate	(S)	0	278	0	0	279
Liquefied Petroleum Gases	124	0	0	122	0	246
Ethane	327	2,928	966	465	282	4,969
Propane	0	564	0	0	0	564
Butane	112	770	0	237	99	1,218
Butane-Propane Mixtures	216	1,023	336	228	183	1,986
Ethane-Propane Mixtures	0	0	631	0	0	631
Other Liquids 1	0	571	0	0	0	571
Unfinished Oils 1	4,021	193	3,749	93	193	8,249
Motor Gasoline Blending Components	3,732	193	3,581	93	29	7,629
Aviation Gasoline Blending Components	289	0	168	0	164	620
0	0	0	0	0	0	0
Finished Petroleum Products	36,241	1,266	3,131	341	1,403	42,382
Finished Motor Gasoline	9,178	71	533	161	437	10,379
Finished Leaded Motor Gasoline	2,928	56	533	132	177	3,825
Finished Unleaded Motor Gasoline	6,250	15	0	29	260	6,554
(s)	0	0	0	0	0	(S)
Finished Aviation Gasoline	0	0	0	0	0	0
Naphtha-Type Jet Fuel	0	0	0	0	0	0
Kerosene-Type Jet Fuel	1,453	0	0	3	78	1,534
Bonded Aircraft Fuel	0	0	0	0	0	0
Other	1,453	0	0	3	0	0
Kerosene	330	0	28	0	78	1,534
Distillate Fuel Oil	7,515	136	8	141	(S)	358
Bonded Ships Bunkers	0	0	0	0	98	7,899
Other	7,515	136	8	141	0	0
Residual Fuel Oil	17,100	298	1,444	39	98	7,899
Bonded Ships Bunkers	0	0	0	0	765	19,645
Other	17,100	298	1,444	39	0	0
Naphtha < 400 Deg. for Petro. Feed. Use	11	13	129	39	765	19,645
Other Oils > 400 Deg. for Petro. Feed. Use	1	1	0	0	0	153
Special Naphthas	9	159	734	0	0	2
Lubricants	376	11	7	(S)	14	916
Waxes	6	2	(S)	0	2	394
Asphalt and Road Oil	259	3	571	245	(S)	11
Miscellaneous Products	3	571	0	0	0	262
Total Imports	64,493	18,533	70,287	2,367	7,163	162,944

1 Crude oil and unfinished oils are reported by the PAD District in which they are to be processed; all other products are reported by the PAD District of entry.

2 Includes crude oil imported for storage in the Strategic Petroleum Reserve.

(S) Less than 500 barrels.

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.

**Table 17. Imports Of Crude Oil and Petroleum Products by Source and PAD District, October 1983**  
 (Thousand Barrels)

Source	Crude Oil 1	LPG	Unfinished Oils	Gasoline	Blending Components	Finished Motor Gasoline	Jet Fuel	Kerosene	Distil. Fuel Oil	Resid. Fuel Oil	Special Naphthas	Other Products 2	Total Products	Total Petroleum	Total Daily Average	
All PAD Districts																
<b>Arab OPEC</b>																
Algeria .....	6,024	0	200	0	0	0	0	0	248	1,088	258	278	2,073	8,097	261	
Iraq .....	439	0	0	0	0	0	0	0	0	0	0	0	0	439	14	
Kuwait .....	249	0	0	0	0	0	0	0	0	0	0	0	0	0	8	
Saudi Arabia .....	18,629	336	246	0	0	0	0	0	0	562	0	0	0	1,164	19,792	638
United Arab Emirates .....	500	0	0	0	0	0	0	0	0	0	0	0	0	500	16	
<b>Subtotal Arab OPEC</b> .....	<b>25,640</b>	<b>336</b>	<b>447</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>248</b>	<b>1,669</b>	<b>258</b>	<b>278</b>	<b>3,237</b>	<b>29,077</b>	<b>938</b>	
<b>Other OPEC</b>																
Ecuador .....	2,162	0	15	0	0	0	0	0	0	0	0	0	0	15	2,177	70
Gabon .....	2,382	0	0	0	0	0	0	0	0	0	0	0	0	0	2,362	76
Indonesia .....	10,711	0	0	0	97	35	0	0	0	561	0	0	0	693	11,404	368
Iran .....	360	0	0	0	0	0	0	0	0	0	0	0	0	0	360	12
Nigeria .....	9,451	0	0	0	0	0	0	0	0	50	19	0	0	69	9,520	307
Venezuela .....	4,718	0	0	0	1,790	215	261	1,320	1,906	228	0	0	5,720	10,438	337	
<b>Subtotal Other OPEC</b> .....	<b>29,765</b>	<b>0</b>	<b>15</b>	<b>0</b>	<b>1,887</b>	<b>250</b>	<b>261</b>	<b>1,370</b>	<b>2,486</b>	<b>228</b>	<b>0</b>	<b>6,497</b>	<b>36,262</b>	<b>1,170</b>		
<b>Other</b>																
Angola .....	1,119	0	0	0	0	0	0	0	0	318	0	0	0	318	1,437	46
Bahamas .....	0	0	2,122	0	0	0	0	0	310	1,652	198	245	5,090	5,090	164	
Brazil .....	0	0	0	0	263	0	0	0	0	0	0	(s)	263	263	8	
Canada .....	8,642	3,893	287	(s)	591	0	11	1,400	723	218	943	8,067	16,709	539		
Congo .....	0	0	0	0	0	0	0	0	0	0	0	0	0	174	6	
Egypt .....	389	0	21	0	0	0	0	0	0	0	0	0	0	21	411	13
France .....	0	0	0	0	0	0	0	0	0	0	0	(s)	(s)	(s)	(s)	
Malaysia .....	0	0	0	0	53	6	0	0	37	0	0	0	96	96	3	
Mexico .....	21,564	631	7	289	203	3	28	201	967	1	2	2	2,332	23,896	771	
Netherlands .....	0	0	588	0	732	0	0	1,349	341	0	(s)	0	3,009	3,009	97	
Netherlands Antilles .....	0	109	653	0	416	0	0	409	3,548	0	199	0	5,335	5,335	172	
Norway .....	998	0	0	0	0	0	0	0	0	0	0	0	0	998	92	
People's Republic of China .....	1,552	0	0	331	501	0	0	0	0	0	0	0	832	2,384	77	
Peru .....	0	0	0	0	0	0	0	0	237	0	0	0	0	237	8	
Puerto Rico .....	0	0	205	0	778	0	27	185	0	0	0	0	290	1,487	48	
Romania .....	0	0	210	0	1,662	0	0	0	0	0	0	0	0	1,872	60	
Spain .....	0	0	0	0	0	0	0	0	0	0	0	(s)	(s)	(s)	(s)	
Trinidad and Tobago .....	2,749	0	0	0	0	0	0	0	212	313	0	0	525	3,273	106	
United Kingdom .....	12,256	0	0	323	0	0	0	0	183	0	77	583	12,898	414		
Virgin Islands .....	0	0	1,583	0	2,134	675	31	2,111	4,893	0	45	11,472	11,472	370		
Zaire .....	540	0	0	0	0	0	0	0	0	0	0	0	0	540	17	
Other Western Hemisphere .....	279	0	0	0	0	0	0	0	6	1,167	13	84	1,269	1,548	50	
Other Eastern Hemisphere .....	1,127	(s)	1,489	0	836	37	0	97	936	(s)	11	3,406	4,534	146		
Subtotal Other .....	51,215	4,633	7,167	620	8,493	1,284	97	6,281	15,490	429	1,896	46,390	97,605	3,149		
<b>Total Imports</b> .....	<b>106,820</b>	<b>4,969</b>	<b>7,629</b>	<b>620</b>	<b>10,379</b>	<b>1,534</b>	<b>358</b>	<b>7,899</b>	<b>19,645</b>	<b>916</b>	<b>2,175</b>	<b>56,124</b>	<b>162,944</b>	<b>5,256</b>		

See footnotes at end of table.

**Table 17. Imports Of Crude Oil and Petroleum Products by Source and PAD District, October 1983**  
**(Thousands Barrels) (continued)**

Source	Crude Oil 1	LPG	Unfin- ished Oils	Gasoline Blending Compo- nents	Finished Motor Gasoline	Jet Fuel	Kero- sene	Distil. Fuel Oil	Resid. Fuel Oil	Special Naphthas	Other Prod- ucts 2	Total Prod- ucts	Total Petro- leum	Total (Daily Average)
<b>PAD District I</b>														
<b>Arab OPEC</b>														
Algeria .....	1,993	0	200	0	0	0	0	248	1,088	0	0	1,536	3,529	114
Saudi Arabia .....	858	0	246	0	0	0	0	0	0	0	0	246	1,104	36
United Arab Emirates .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal Arab OPEC .....	2,851	0	447	0	0	0	0	248	1,088	0	0	1,783	4,633	149
<b>Other OPEC</b>														
Gabon .....	958	0	0	0	0	0	0	0	0	0	0	0	958	31
Indonesia .....	3,146	0	0	0	0	0	0	0	0	0	0	0	3,146	101
Nigeria .....	1,600	0	0	0	0	0	0	50	19	0	0	69	1,670	54
Venezuela .....	2,549	0	0	0	1,790	215	261	1,320	1,674	0	0	5,260	7,808	252
Subtotal Other OPEC .....	8,252	0	0	0	1,790	215	261	1,370	1,693	0	0	5,329	13,581	438
<b>Other</b>														
Angola .....	1,119	0	0	0	0	0	0	0	318	0	0	318	1,437	46
Bahamas .....	0	0	436	0	0	563	0	310	1,652	0	0	0	2,962	96
Brazil .....	0	0	0	0	0	263	0	0	0	0	(S)	263	283	8
Canada .....	912	218	0	(S)	359	0	11	1,123	387	9	210	2,318	3,229	104
Congo .....	0	0	0	0	0	0	0	0	174	0	0	0	174	6
Egypt .....	0	0	0	0	0	0	0	0	0	0	0	0	21	13
France .....	389	0	21	0	0	0	0	0	0	0	0	(S)	(S)	(S)
Mexico .....	3,650	0	0	0	289	0	0	0	0	0	0	0	1,443	164
Netherlands .....	0	0	588	0	732	0	0	198	957	0	0	0	5,083	97
Netherlands Antilles .....	0	109	453	0	416	0	0	1,349	341	0	(S)	0	3,009	3,009
Norway .....	568	0	0	0	0	0	0	409	3,356	0	199	0	4,943	159
People's Republic of China .....	536	0	0	0	0	0	0	0	0	0	0	0	568	18
Peru .....	0	0	0	0	0	0	0	0	0	0	0	0	536	17
Puerto Rico .....	0	0	206	0	778	0	27	185	0	0	0	0	237	8
Romania .....	0	0	210	0	1,662	0	0	0	0	0	0	290	1,487	48
Spain .....	0	0	0	0	0	0	0	0	0	0	0	0	1,872	60
Trinidad and Tobago .....	(S)	0	0	0	0	0	0	0	0	0	(S)	(S)	(S)	(S)
United Kingdom .....	4,444	0	0	0	323	0	0	0	212	313	0	0	525	17
Virgin Islands .....	0	0	533	0	2,134	675	31	2,111	4,699	0	77	583	5,027	162
Zaire .....	540	0	0	0	0	0	0	0	0	0	0	0	10,183	328
Other Western Hemisphere .....	0	0	0	0	0	0	0	0	0	0	0	0	540	17
Other Eastern Hemisphere .....	518	(S)	838	0	0	0	0	0	1,167	0	0	0	1,167	38
Subtotal Other .....	12,677	327	3,286	289	7,388	1,238	69	5,857	14,319	9	781	33,602	2,080	43
<b>Total Imports</b> .....	23,780	327	3,732	289	9,178	1,453	330	7,515	17,100	9	781	40,714	64,493	43
<b>PAD District II</b>														
<b>Arab OPEC</b>														
Saudi Arabia .....	1,343	0	0	0	0	0	0	0	0	0	0	0	1,343	43
Subtotal Arab OPEC .....	1,343	0	0	0	0	0	0	0	0	0	0	0	1,343	43

See footnotes at end of table.

Table 17. Imports Of Crude Oil and Petroleum Products by Source and PAD District, October 1983  
 (Thousands Barrels) (continued)

Source	Crude Oil 1	LPG	Unfin-ished Oils	Gasoline Blending Components	Finished Motor Gasoline	Jet Fuel	Kero-sene	Distil. Fuel Oil	Resid. Fuel Oil	Special Naphthas	Other Prod-ucts 2	Total Prod-ucts	Total Petroleum	Total (Daily Average)
PAD District II														
Other OPEC														
Iran	360	0	0	0	0	0	0	0	0	0	0	0	360	12
Nigeria	457	0	0	0	0	0	0	0	0	0	0	0	457	15
Subtotal Other OPEC	817	0	0	0	0	0	0	0	0	0	0	0	817	26
Other														
Canada	6,235	2,928	193	0	71	0	0	136	298	159	602	4,386	10,621	343
France	0	0	0	0	0	0	0	0	0	0	(s)	0	(s)	141
Mexico	4,385	0	0	0	0	0	0	0	0	0	0	0	4,385	868
Trinidad and Tobago	868	0	0	0	0	0	0	0	0	0	0	0	868	28
United Kingdom	459	0	0	0	0	0	0	0	0	0	0	0	459	15
Other Western Hemisphere	139	0	0	0	0	0	0	0	0	0	0	0	139	4
Other Eastern Hemisphere	0	0	0	0	0	0	0	0	0	0	(s)	(s)	(s)	531
Subtotal Other	12,087	2,928	193	0	71	0	0	136	298	159	602	4,386	16,473	
Total Imports	14,247	2,928	193	0	71	0	0	136	298	159	602	4,386	18,633	601
PAD District III														
Arab OPEC														
Algeria	4,031	0	0	0	0	0	0	0	0	258	278	537	4,565	147
Iraq	439	0	0	0	0	0	0	0	0	0	0	0	439	14
Kuwait	249	0	0	0	0	0	0	0	0	0	0	0	249	8
Saudi Arabia	16,428	336	0	0	0	0	0	0	582	0	0	0	17,346	560
United Arab Emirates	500	0	0	0	0	0	0	0	0	0	0	0	500	16
Subtotal Arab OPEC	21,647	336	0	0	0	0	0	0	582	258	278	1,454	23,101	745
Other OPEC														
Ecuador	2,162	0	15	0	0	0	0	0	0	0	0	0	15	2,177
Gabon	1,404	0	0	0	0	0	0	0	0	0	0	0	1,404	45
Indonesia	2,430	0	0	0	0	0	0	0	434	0	0	0	434	2,864
Nigeria	7,394	0	0	0	0	0	0	0	0	0	0	0	7,394	239
Venezuela	2,169	0	0	0	0	0	0	0	232	228	0	460	2,530	85
Subtotal Other OPEC	15,560	0	15	0	0	0	0	0	666	228	0	910	16,469	531
Other														
Bahamas	0	0	1,686	0	0	0	0	0	0	198	245	2,129	2,129	69
Canada	(s)	0	0	0	0	0	0	0	0	36	0	36	36	1
France	0	0	0	(s)	203	3	28	2	2	1	(s)	(s)	(s)	465
Mexico	13,529	631	7	(s)	0	0	0	0	0	0	0	876	14,407	
Netherlands Antilles	0	0	199	0	0	0	0	0	0	0	0	199	199	6
Norway	430	0	0	0	0	0	0	0	0	0	0	0	430	14
People's Republic of China	1,016	0	0	0	0	0	0	0	0	0	0	0	497	1,513
Trinidad and Tobago	1,880	0	0	0	0	0	0	0	0	0	0	0	1,880	61
United Kingdom	7,352	0	0	0	0	0	0	0	0	0	0	0	7,352	237
Virgin Islands	0	0	1,050	0	0	0	0	0	0	194	0	45	1,290	42

See footnotes at end of table.

**Table 17. Imports Of Crude Oil and Petroleum Products by Source and PAD District, October 1983  
(Thousand Barrels) (continued)**

Source	Crude Oil <sub>1</sub>	LPG	Unfinished Oils	Gasoline Blending Components	Finished Motor Gasoline	Jet Fuel	Kerosene	Distil. Fuel Oil	Resid. Fuel Oil	Special Naphthas	Other Products	Total Products	Total Petroleum	Total (Daily Average)
PAD District III														
Other														
Other Western Hemisphere	139	0	0	0	0	0	0	0	0	0	13	84	102	241
Other Eastern Hemisphere	609	0	623	0	0	0	0	0	0	0	7	629	1,239	8
Subtotal Other	24,956	631	3,566	168	533	3	28	8	197	248	380	5,761	30,717	40
<b>Total Imports</b>	<b>62,163</b>	<b>966</b>	<b>3,581</b>	<b>168</b>	<b>533</b>	<b>3</b>	<b>28</b>	<b>8</b>	<b>1,444</b>	<b>734</b>	<b>659</b>	<b>8,125</b>	<b>70,287</b>	<b>2,267</b>
PAD District IV														
Other														
Canada	1,345	465	93	0	161	0	0	141	39	0	123	1,022	2,367	76
Subtotal Other	1,345	465	93	0	161	0	0	141	39	0	123	1,022	2,367	76
<b>Total Imports</b>	<b>1,345</b>	<b>465</b>	<b>93</b>	<b>0</b>	<b>161</b>	<b>0</b>	<b>0</b>	<b>141</b>	<b>39</b>	<b>0</b>	<b>123</b>	<b>1,022</b>	<b>2,367</b>	<b>76</b>
PAD District V														
Other OPEC														
Indonesia	5,135	0	0	0	97	35	0	0	127	0	0	259	5,394	174
Subtotal Other OPEC	5,135	0	0	0	97	35	0	0	127	0	0	259	5,394	174
<b>Total Imports</b>	<b>5,135</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>97</b>	<b>35</b>	<b>0</b>	<b>0</b>	<b>127</b>	<b>0</b>	<b>0</b>	<b>259</b>	<b>5,394</b>	<b>174</b>
Other														
Canada	150	282	1	0	0	0	(S)	0	0	14	8	305	455	15
Malaysia	0	0	0	53	6	0	0	37	0	0	96	96	96	3
Mexico	0	0	0	0	0	0	0	1	7	0	2	11	11	(S)
Netherlands Antilles	0	0	0	0	0	0	0	192	0	0	0	192	192	6
People's Republic of China	0	0	0	164	172	0	0	0	0	0	0	336	336	11
United Kingdom	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Eastern Hemisphere	0	0	28	0	115	37	0	97	402	0	1	680	680	22
Subtotal Other	150	282	29	164	340	43	(S)	98	638	14	10	1,619	1,769	57
<b>Total Imports</b>	<b>5,286</b>	<b>282</b>	<b>29</b>	<b>164</b>	<b>437</b>	<b>78</b>	<b>(S)</b>	<b>98</b>	<b>765</b>	<b>14</b>	<b>10</b>	<b>1,878</b>	<b>7,163</b>	<b>231</b>

<sup>1</sup> Includes crude oil imported for storage in the Strategic Petroleum Reserve.

<sup>2</sup> Includes aviation gasoline, waxes, asphalt, lubricants, natural gasoline, isopentane, plant condensate, naphthas less than 400 degrees F, other oils greater than 400 degrees F and miscellaneous products.

(S) Less than 500 barrels or less than 500 barrels per day.

Note: Totals may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.

**Table 18. Exports Of Crude Oil And Petroleum Products By PAD District, October 1982**  
**(Thousand Barrels)**

Commodity	Petroleum Administration for Defense Districts					Total
	I	II	III	IV	V	
Crude Oil (including lease condensate) 1 .....	0	341	0	0	3,995	4,336
Liquefied Petroleum Gases .....	34	302	550	0	101	987
Ethane .....	0	0	(S)	0	0	(S)
Propane .....	18	121	354	0	40	534
Butane .....	16	180	195	0	61	453
Butane-Propane Mixtures .....	0	0	0	0	0	0
Finished Motor Gasoline .....	32	7	0	0	12	51
Naphtha-Type Jet Fuel .....	(S)	0	0	0	0	(S)
Kerosene-Type Jet Fuel .....	0	0	0	0	24	24
Kerosene .....	2	1	216	0	0	218
Distillate Fuel Oil .....	100	(S)	1,849	0	1,390	1,701
Residual Fuel Oil .....	(S)	0	218	1	15	285
Naphtha < 400 Deg. for Petrochem. Feedstock .....	49	4	164	0	2	207
Other Oils > 400 Deg. for Petrochem. Feedstock .....	(S)	41	39	(S)	3	47
Special Naphthas .....	5	1	287	1	47	483
Lubricants .....	127	21	(S)	(S)	5	34
Waxes .....	5	(S)	24	0	1,888	4,713
Petroleum Coke .....	30	63	2,732	0	4	8
Asphalt .....	2	1	(S)	1	5	27
Miscellaneous Products .....	14	2	6	0	6,378	13,518
Total Product Exports .....	400	442	6,285	2	10,373	17,853
Total Exports .....	400	783	6,285	2	10,373	17,853

1 Exports of crude oil are prohibited by law. However, some crude oil is exchanged with Canada on a barrel for barrel basis, and crude oil is shipped to U.S. Territories (especially Puerto Rico and the Virgin Islands) to be refined there. The Statistical Tracking System counts these exchanges and shipments as imports and exports.

(S) Less than 500 barrels.

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.

**Table 19. Exports of Crude Oil and Petroleum Products by Destination, October 1963**  
 (Thousand Barrels)

Destination	Crude Oil 1	LPG	Finished Motor Gasoline	Jet Fuel	Dist. Fuel Oil	Residual Fuel Oil	Special Naphthas	Lubri- cants	Petro- leum Waxes	Asphalt	Other	Total	Total (Daily Averages)
Argentina .....	0	(s)	0	0	0	0	(s)	3	20	(s)	0	1	21
Australia .....	0	(s)	0	0	0	0	(s)	2	180	(s)	2	193	6
Bahamas .....	0	5	1	(s)	100	282	0	(s)	0	(s)	0	(s)	389
Bahrain .....	0	0	0	0	0	0	(s)	45	(s)	0	0	(s)	13
Belgium & Luxembourg .....	0	(s)	0	0	0	0	(s)	0	306	(s)	0	(s)	352
Brazil .....	0	0	0	0	0	0	(s)	0	0	(s)	0	(s)	11
Cameroon .....	0	0	0	0	0	0	(s)	0	0	(s)	0	(s)	0
Canada .....	341	308	48	0	242	185	4	57	2	127	2	237	52
Chile .....	0	0	0	0	0	0	1	1	(s)	0	0	(s)	0
China (Taiwan) .....	0	(s)	0	0	0	1,046	(s)	15	(s)	82	(s)	1	1,144
Colombia .....	0	1	0	0	0	0	(s)	1	5	(s)	0	2	37
Costa Rica .....	0	0	0	0	0	0	(s)	1	12	(s)	0	1	21
Denmark .....	0	0	0	0	0	0	(s)	0	0	(s)	0	2	1
Dominican Republic .....	0	40	0	0	0	0	(s)	0	0	(s)	0	4	5
Ecuador .....	0	108	0	0	210	0	(s)	0	2	(s)	0	(s)	1
Egypt .....	0	0	0	0	0	0	(s)	1	1	(s)	0	6	42
El Salvador .....	0	0	0	0	0	0	(s)	0	0	(s)	0	0	11
Finland .....	0	0	0	0	0	0	(s)	1	11	(s)	0	146	5
France .....	0	0	0	0	0	0	(s)	0	0	(s)	0	1	15
French Pacific Isl. ....	0	0	0	0	0	0	(s)	1	1	815	0	(s)	0
Ghana .....	0	0	0	0	0	0	(s)	0	0	(s)	0	74	29
Greece .....	0	0	0	0	0	0	(s)	0	0	(s)	0	50	2
Guatemala .....	66	(s)	(s)	0	0	0	(s)	0	0	(s)	0	0	0
Honduras .....	0	(s)	0	0	0	0	(s)	0	0	(s)	0	1	76
Hong Kong .....	0	0	0	0	0	0	(s)	2	0	(s)	0	0	2
India .....	0	1	0	0	0	0	(s)	2	0	(s)	0	0	0
Indonesia .....	0	0	0	0	0	0	(s)	0	0	(s)	0	1	221
Iran .....	0	0	0	0	0	0	(s)	0	0	(s)	0	1	7
Israel .....	0	0	0	0	0	0	(s)	0	0	(s)	0	1	2
Italy .....	0	2	0	0	0	0	(s)	0	0	(s)	0	0	0
Ivory Coast .....	0	0	0	0	0	0	(s)	1	1	670	0	90	763
Jamaica .....	0	2	0	0	0	0	(s)	0	0	(s)	0	0	25
Japan .....	1	1	0	0	0	0	(s)	27	(s)	0	0	(s)	247
Jordan .....	0	0	0	0	0	0	(s)	4	3	1,227	0	86	8
Korea, Republic of .....	0	(s)	0	0	0	0	(s)	0	1	(s)	0	(s)	1
Kuwait .....	0	0	0	0	0	0	(s)	1	5	(s)	5	2	14
Lebanon .....	0	0	0	0	0	0	(s)	0	1	(s)	0	1	1
Liberia .....	0	0	0	0	0	0	(s)	0	0	(s)	0	0	1
Malaysia .....	0	0	0	0	0	0	(s)	0	0	(s)	0	1	1
Mexico .....	376	2	24	0	0	0	(s)	7	93	8	34	4	546
Netherlands .....	0	1	(s)	0	0	0	(s)	1	1	147	0	46	18
Netherlands Antilles .....	0	(s)	0	0	0	0	(s)	0	0	(s)	0	305	6
New Zealand .....	0	0	0	0	0	0	(s)	0	0	(s)	0	0	10
Nicaragua .....	0	0	0	0	0	0	(s)	0	0	(s)	0	1	1
Nigeria .....	0	0	0	0	0	0	(s)	0	0	(s)	0	0	1
Norway .....	0	0	0	0	0	0	(s)	0	0	(s)	1	1	3
Pacific Trust Terr. ....	0	0	0	0	0	0	(s)	0	0	(s)	0	105	3
Panama .....	0	30	0	0	0	0	(s)	0	0	(s)	0	(s)	294
Peru .....	0	0	0	0	0	0	(s)	2	0	(s)	0	0	9
Philippines .....	0	0	0	0	0	0	(s)	1	4	(s)	0	3	1
Puerto Rico .....	0	29	0	0	0	0	(s)	189	(s)	16	1	(s)	8
Rep. of South Africa .....	0	1	0	0	0	0	(s)	0	25	-3	81	9	244
Saudi Arabia .....	0	2	0	0	0	0	(s)	0	0	(s)	2	111	4
									19	0	0	1	23

See footnotes at end of table.

**Table 19. Exports of Crude Oil and Petroleum Products by Destination, October 1983**  
**(Thousands Barrels)**

**(continued)**

Destination	Crude Oil 1	LPG	Finished Motor Gasoline	Jet Fuel	Dist. Fuel Oil	Residual Fuel Oil	Special Naphthenes	Lubri- cants	Waxes	Petro- leum Coke	Asphalt	Other	Total	Total (Daily Average)
Singapore .....	0	7	0	0	548	6	3	(s)	0	0	(s)	8	573	18
Spain .....	0	0	0	(s)	0	0	0	1	0	450	0	1	451	15
Surinam .....	0	(s)	0	0	0	0	0	1	0	0	0	0	(s)	(s)
Sweden .....	0	0	0	0	0	0	0	1	0	0	0	1	2	(s)
Switzerland .....	0	(s)	0	0	0	0	1	2	(s)	0	0	0	(s)	3
Thailand .....	0	0	0	0	0	0	0	15	(s)	0	0	0	(s)	16
Trinidad and Tobago .....	0	(s)	0	0	0	0	(s)	1	0	0	0	0	(s)	1
Turkey .....	0	(s)	0	0	0	0	(s)	4	0	0	0	0	25	1
United Arab Emirates .....	0	1	0	0	0	0	0	1	0	0	0	0	25	(s)
United Kingdom .....	0	1	(s)	0	(s)	0	(s)	28	(s)	36	(s)	1	68	2
U.S.S.R. ....	0	0	0	0	0	0	0	2	0	0	0	0	39	41
Uruguay .....	0	0	0	0	0	0	(s)	0	0	0	0	0	(s)	(s)
Venezuela .....	0	(s)	0	0	0	0	(s)	(s)	0	0	0	0	68	2
Virgin Islands .....	3,447	(s)	0	0	0	730	0	(s)	0	66	(s)	1	4,178	135
West Germany .....	0	0	0	(s)	0	0	0	3	(s)	84	(s)	4	92	3
Yugoslavia .....	0	0	0	0	0	0	(s)	0	0	0	0	0	(s)	(s)
Other .....	548	3	0	0	(s)	276	(s)	6	(s)	0	0	0	21	854
Total .....	4,336	987	51	24	4,732	47	483	34	4,713	8	738	17,853	576	28

<sup>1</sup> Exports of crude oil are prohibited by law. However, some crude oil is exchanged with Canada on a barrel for barrel basis, and crude oil is shipped to U.S. Territories (especially Puerto Rico and the Virgin Islands) to be refined there. The Statistical Tracking Systems count these exchanges and shipments as imports and exports.

(s) Less than 500 barrels or less than 500 barrels per day.

Note: Total may not equal sum of components due to independent rounding.

Source: See Explanatory Notes on Data Collection and Estimation.

**Table 20. Stocks of Crude Oil and Petroleum Products By PAD District, October 1983**  
(Thousand Barrels)

Commodity	PAD District I			PAD District II			PAD District III			PAD District IV			PAD District V					
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wis., Dak.	Ola., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total	Rocky Mt.	West Coast		
<b>Crude Oil (Incl. lease condensate)</b>																		
Refinery .....	—	—	13,901	—	—	—	—	14,052	—	—	—	—	—	47,380	1,993	23,433		
Tank Farms and Pipelines .....	—	—	1,313	—	—	—	—	58,608	—	—	—	—	—	100,237	9,545	100,759		
Leases .....	—	—	56	—	—	—	—	1,631	—	—	—	—	—	17,323	1,351	31,972		
Strategic Petroleum Reserve1 .....	—	—	0	—	—	—	—	0	—	—	—	—	—	367,240	0	201,675		
Aleaskan In-Transit .....	—	—	0	—	—	—	—	0	—	—	—	—	—	532,180	0	22,032		
Total .....	—	—	15,270	—	—	—	—	74,291	—	—	—	—	—	532,180	0	367,240		
<b>Total Stocks, All Oils (excl. Crude Oil)</b>																		
Refinery .....	42,891	2,956	45,847	1,112	40,314	5,792	14,258	61,476	10,221	79,290	46,726	4,810	1,272	142,319	10,008	59,771		
Bulk Terminal .....	—	—	134,656	—	—	—	—	95,977	—	—	—	—	—	96,521	2,625	319,421		
Pipeline .....	—	—	28,677	—	—	—	—	34,307	—	—	—	—	—	38,686	2,526	354,103		
Natural Gas Processing Plant .....	—	248	52	300	0	207	46	1,727	1,980	1,854	6,271	808	79	187	9,199	2,068		
Total .....	—	—	209,480	—	—	—	—	193,740	—	—	—	—	—	286,725	15,372	108,684		
<b>Natural Gasoline and Isopentane</b>																		
Refinery .....	17	0	17	0	63	55	131	249	138	241	222	1	15	617	11	20		
Bulk Terminal .....	—	—	5	—	—	—	—	1,039	—	—	—	—	—	2,345	2	914		
Pipeline .....	—	—	0	—	—	—	—	260	—	200	315	232	192	27	717	0	3,391	
Natural Gas Processing Plant .....	—	4	6	10	0	21	9	170	—	1,748	—	—	—	—	797	5	1,011	
Total .....	—	—	—	—	32	—	—	—	—	—	—	—	—	4,476	41	21	1,059	
<b>Unfractionated Stream</b>																		
Bulk Terminal .....	—	—	0	—	—	—	—	—	—	—	—	—	—	—	—	—		
Pipeline .....	—	—	0	—	—	—	—	—	—	—	—	—	—	—	—	—		
Natural Gas Processing Plant .....	—	0	3	0	—	—	—	100	—	1	1,191	1,292	146	2,736	117	0	4,361	
Total .....	—	—	—	3	—	—	—	—	—	—	3,932	—	—	—	10	466	0	2,984
<b>Plant Condensate</b>																		
Refinery .....	0	0	0	0	5	0	0	5	4	58	0	67	0	129	0	0	134	
Bulk Terminal .....	—	—	0	—	—	—	—	0	—	—	—	—	—	—	3	0	3	
Pipeline .....	—	—	0	0	0	2	3	4	9	30	38	16	6	—	200	0	200	
Natural Gas Processing Plant .....	—	0	0	0	0	—	—	—	14	—	—	—	—	—	422	16	0	
Total .....	—	—	—	—	0	—	—	—	—	—	—	—	—	—	7,249	491	11,675	
<b>Liquefied Petroleum Gases</b>																		
Refinery .....	588	12	600	340	1,952	148	641	3,081	329	272	2,591	40	26	3,258	299	583	7,821	
Bulk Terminal .....	—	—	2,278	—	—	—	—	28,118	—	—	—	—	—	—	61,262	113	2,817	
Pipeline .....	—	—	2,994	—	—	—	—	5,663	—	—	—	—	—	—	3,551	36	94,588	
Natural Gas Processing Plant .....	216	43	259	0	83	33	362	1,144	3,263	483	44	145	44	5,079	121	0	12,244	
Total .....	—	—	6,131	—	—	—	—	37,340	—	—	—	—	—	—	73,150	569	154	
															3,554	569	6,091	

See footnotes at end of table.

**Table 20. Stocks of Crude Oil and Petroleum Products By PAD District, October 1983  
(Thousand Barrels) (continued)**

Commodity	PAD District I			PAD District II			PAD District III			PAD District IV			PAD Dist. V			
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wis., Dak.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total	Rocky Mt.	West Coast
Ethane	0	0	0	0	2	21	0	23	0	9	0	0	0	9	0	0
Refinery	—	—	0	—	—	—	1,241	—	—	—	—	—	—	4,164	0	0
Bulk Terminal	—	—	0	—	—	—	892	—	—	—	—	—	—	299	0	0
Pipeline	—	—	0	0	0	22	0	13	35	3	464	0	0	471	1	0
Natural Gas Processing Plant	0	0	0	0	—	—	—	2,191	—	—	—	—	—	4,943	1	0
Total	—	—	0	—	—	—	—	—	—	—	—	—	—	—	7,135	0
Propane for Petrochemical Feedstock Use	21	0	21	0	82	0	0	82	3	7	7	0	0	17	0	0
Refinery	—	—	21	—	—	—	—	82	—	—	—	—	—	17	0	0
Total	—	—	21	—	—	—	—	82	—	—	—	—	—	17	0	0
Propane For Other Uses	526	5	531	2	1,300	30	229	1,561	68	57	933	5	0	1,063	137	101
Refinery	—	—	1,886	—	—	—	—	17,618	—	—	—	—	—	28,459	112	658
Bulk Terminal	—	—	2,845	—	—	—	—	2,808	—	—	—	—	—	1,212	0	0
Pipeline	—	—	226	0	41	21	198	260	512	775	364	21	—	78	1,750	84
Natural Gas Processing Plant	188	—	38	—	—	—	—	—	22,247	—	—	—	—	32,484	333	133
Total	—	—	5,488	—	—	—	—	—	—	—	—	—	—	—	892	61,444
Butane For Petro. Feed Use	0	0	0	0	0	20	0	20	0	20	0	27	0	2	0	29
Refinery	—	—	0	—	—	—	—	—	20	—	—	—	—	—	29	1
Total	—	—	0	—	—	—	—	—	20	—	—	—	—	—	29	1
Butane For Other Uses	41	7	48	286	356	58	288	988	147	102	789	20	15	1,073	108	289
Refinery	—	—	390	—	—	—	—	3,771	—	—	—	—	—	14,796	0	1,422
Bulk Terminal	—	—	133	—	—	—	—	969	—	—	—	—	—	635	1	0
Pipeline	—	—	30	0	14	10	41	65	343	1,224	78	17	29	1,691	35	13
Natural Gas Processing Plant	27	—	3	601	—	—	—	—	5,793	—	—	—	—	18,195	144	1,724
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	26,457	52
Butane-Propane Mixtures For Other Uses	0	0	0	0	0	2	0	0	2	1	8	3	0	5	17	147
Refinery	—	—	0	—	—	—	—	381	—	—	—	—	—	11	2	168
Bulk Terminal	—	—	0	—	—	—	—	18	—	—	—	—	—	638	0	998
Pipeline	—	—	0	0	0	0	0	0	0	5	6	0	1	0	0	656
Natural Gas Processing Plant	0	—	0	—	—	—	—	—	401	—	—	—	—	678	0	17
Total	—	—	0	—	—	—	—	—	—	—	—	—	—	—	2	1,839
Ethane-Propane Mixtures	—	—	0	—	—	—	—	—	—	—	—	—	—	—	—	—
Bulk Terminal	—	—	0	0	0	0	0	—	—	—	—	—	—	7,817	0	11,133
Pipeline	—	—	0	0	0	0	0	94	64	224	0	0	0	689	35	0
Natural Gas Processing Plant	0	—	0	—	—	—	—	—	—	—	—	—	—	251	0	1,368
Total	—	—	0	—	—	—	—	—	4,054	—	—	—	—	8,757	35	0

See footnotes at end of table.

Stocks of Crude Oil and Petroleum Products By PAD District, October 1983  
[Thousand Barrels] (continued)

Commodity	PAD District I			PAD District II			PAD District III			PAD District IV			PAD Dist. V		United States	
	East Coast	Appalachian #1	Total	Appalachian #2	Ind. Ill., Ky.	Minn., Wisc., Dak.	Oklahoma, Kansas, Mo.	Total	Texas Inland Coast	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total	Rocky Mt.	West Coast
<b>Isobutane</b>																
Refinery	0	0	0	52	210	19	124	405	110	62	859	13	6	1,050	51	44
Bulk Terminal	—	—	2	—	—	—	—	—	—	—	—	—	—	6,015	1	131
Pipeline	—	—	16	—	—	6	2	16	24	57	794	41	5	—	78	0
Natural Gas Processing Plant	—	1	2	3	0	—	—	—	—	—	—	—	—	—	—	0
Total	—	—	21	—	—	—	—	2,552	—	—	—	—	7	904	1	3
<b>Other Hydrocarbons and Alcohol</b>																
Refinery	125	0	125	0	136	0	0	136	1	88	28	0	0	117	0	5
Total	—	—	125	—	—	—	—	136	—	—	—	—	—	117	0	5
<b>Unfinished Oils</b>																
Refinery	3,490	220	3,710	50	2,903	163	1,180	4,296	767	7,795	5,295	157	99	14,113	492	4,770
Naphtha and Lighter Kerosene and Lighter Gas Oils	1,945	90	2,035	0	2,390	4	695	3,089	599	7,560	1,327	30	6	9,522	604	3,775
Heavy Gas Oils	7,347	183	7,530	136	4,895	456	1,259	6,746	1,039	10,873	6,443	205	109	18,669	1,476	19,025
Residuum	2,150	289	2,439	1	2,983	11	1,159	4,154	365	5,344	3,048	45	0	8,802	583	5,455
Total	14,932	782	15,714	187	13,171	634	4,293	18,285	2,770	31,572	16,113	437	214	51,106	3,155	23,860
<b>Motor Gasoline Blending Components</b>																
Refinery	4,510	88	4,598	46	5,107	755	1,323	7,231	1,728	9,942	6,368	136	155	18,329	1,621	7,600
Bulk Terminal	—	—	56	—	—	—	—	271	—	—	—	—	—	572	1	157
Pipeline	—	—	0	—	—	—	—	35	—	—	—	—	—	26	0	0
Total	—	—	4,654	—	—	—	—	7,537	—	—	—	—	—	18,927	1,622	7,757
<b>Aviation Gasoline Blending Components</b>																
Refinery	12	0	12	0	67	0	43	110	0	8	167	0	0	175	0	26
Total	—	—	12	—	—	—	—	110	—	—	—	—	—	175	0	26
<b>Total Finished Motor Gasoline</b>																
Refinery	5,344	267	5,611	104	5,471	1,250	3,151	9,976	2,180	8,914	5,179	791	203	17,267	1,913	6,754
Bulk Terminal	—	—	37,270	—	—	—	—	32,054	—	—	—	—	—	12,674	1,533	41,521
Pipeline	—	—	14,191	—	—	—	—	15,694	—	—	—	—	—	19,103	1,210	94,020
Natural Gas Processing Plant	28	0	28	0	0	0	0	0	0	0	0	0	0	0	0	2,051
Total	—	—	57,100	—	—	—	—	57,724	—	—	—	—	—	49,044	9	52,249
<b>Finished Leaded Motor Gasoline</b>																
Refinery	2,468	154	2,622	69	2,466	781	1,720	5,036	1,202	3,762	2,806	340	135	8,245	1,196	3,278
Bulk Terminal	—	—	17,566	—	—	—	—	15,870	—	—	—	—	—	6,452	944	20,377
Pipeline	—	—	8,265	0	—	—	—	8,007	—	—	—	—	—	9,718	772	45,758
Natural Gas Processing Plant	14	0	14	0	0	0	0	0	0	0	0	0	0	0	6	27,617
Total	—	—	28,467	—	—	—	—	28,913	—	—	—	—	—	24,415	2,918	9,059

See footnotes at end of table.

Table 20. Stocks of Crude Oil and Petroleum Products By PAD District, October 1983  
(Thousand Barrels) (continued)

Commodity	PAD District I			PAD District II			PAD District III			PAD District IV			PAD Dist. V		United States Coast			
	East	Appalachian	Coast	Ind., Ill., Ky.	Appalachian #2	Minn., Wisc., Dak.	Oka., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	L.A. Gulf Coast	No. La., Ark.	New Mexico	Total	Rocky Mt.			
<b>Finished Unleaded Motor Gasoline</b>																		
Refinery .....	2,876	—	113	2,989	35	3,005	469	1,431	4,940	978	5,152	2,373	451	68	9,022	717	3,476	21,144
Bulk Terminal .....	—	—	19,704	—	—	—	—	16,184	—	—	—	—	—	—	6,222	589	5,563	48,262
Pipeline .....	—	—	5,926	—	0	0	0	7,687	—	—	—	—	—	—	9,385	438	1,196	24,632
Natural Gas Processing Plant .....	—	14	0	14	0	0	0	0	0	0	0	0	0	0	3	0	0	17
Total .....	—	—	28,633	—	—	—	—	28,811	—	—	—	—	—	—	24,629	1,747	10,235	94,055
<b>Finished Aviation Gasoline</b>																		
Refinery .....	42	0	42	0	116	0	15	131	107	364	176	0	0	647	37	220	1,077	
Bulk Terminal .....	—	—	389	—	—	—	—	327	—	—	—	—	—	—	100	23	316	1,155
Pipeline .....	—	—	18	—	0	0	0	101	—	—	—	—	—	—	57	0	0	176
Natural Gas Processing Plant .....	—	0	0	0	0	0	0	0	33	0	0	0	0	0	33	0	0	33
Total .....	—	—	449	—	—	—	—	559	—	—	—	—	—	—	837	60	536	2,441
<b>Naphtha-Type Jet Fuel</b>																		
Refinery .....	303	38	341	0	492	79	202	773	205	469	203	193	183	1,253	236	776	776	3,379
Bulk Terminal .....	—	—	101	—	—	—	—	768	—	—	—	—	—	—	186	18	535	1,608
Pipeline .....	—	—	163	—	—	—	—	212	—	—	—	—	—	—	333	97	332	1,137
Total .....	—	—	605	—	—	—	—	1,753	—	—	—	—	—	—	1,772	351	1,643	6,124
<b>Kerosene-Type Jet Fuel</b>																		
Refinery .....	1,718	0	1,718	59	1,136	121	55	1,371	231	3,723	2,452	11	73	6,490	371	3,516	13,466	
Bulk Terminal .....	—	—	5,102	—	—	—	—	4,438	—	—	—	—	—	—	1,848	284	1,901	13,573
Pipeline .....	—	—	3,239	—	—	—	—	2,195	—	—	—	—	—	—	3,966	111	718	10,229
Total .....	—	—	10,059	—	—	—	—	8,004	—	—	—	—	—	—	12,304	766	6,195	37,268
<b>Kerosene</b>																		
Refinery .....	366	87	453	0	666	62	278	1,006	54	961	804	32	87	1,938	7	434	3,838	
Bulk Terminal .....	—	—	3,433	—	—	—	—	1,209	—	—	—	—	—	—	829	20	47	5,538
Pipeline .....	—	—	302	—	—	—	—	175	—	—	—	—	—	—	351	0	0	828
Natural Gas Processing Plant .....	—	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	3
Total .....	—	—	4,188	—	—	—	—	2,390	—	—	—	—	—	—	3,121	27	481	10,207
<b>Distillate Fuel Oils</b>																		
Refinery .....	7,568	422	7,990	96	6,791	1,559	3,012	11,458	1,190	10,306	5,094	1,326	163	18,079	1,441	4,584	43,552	
Bulk Terminal .....	—	—	58,854	—	—	—	—	19,552	—	—	—	—	—	—	8,766	614	5,122	92,908
Pipeline .....	—	—	7,770	—	—	—	—	9,761	—	1	—	—	—	—	7,762	577	954	26,824
Natural Gas Processing Plant .....	—	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Total .....	—	—	74,614	—	—	—	—	40,771	—	—	—	—	—	—	34,608	2,632	10,660	163,285
<b>Residual Fuel Oils</b>																		
Refinery .....	3,219	102	3,321	19	1,705	198	103	2,025	1,794	379	4,558	3,041	150	31	8,159	452	6,180	20,137
Bulk Terminal .....	—	—	21,975	—	—	—	—	9,764	—	—	—	—	—	—	5,409	0	0	2,096
Pipeline .....	—	—	0	0	—	—	—	—	0	—	—	—	—	—	1	0	0	31,274
Total .....	—	—	25,296	—	—	—	—	—	—	—	—	—	—	—	13,569	452	8,284	51,420

See footnotes at end of table.

**Table 20. Stocks of Crude Oil and Petroleum Products By PAD District, October 1983**  
 (Thousands of Barrels) (continued)

Commodity	PAD District I			PAD District II			PAD District III			PAD District IV			PAD Dist. V		United States West Coast	
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wis., Dak.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total	Rocky Mt.	
Naphtha < 400 Deg. Petro. Feedstock	35	0	35	0	142	0	48	190	68	978	379	86	0	1,511	0	176
Refinery Total	35	0	35	0	142	0	48	190	68	978	379	86	0	1,511	0	176
Other Oils > 400 Deg. Petro. Feedstock	4	0	4	0	23	0	0	23	316	1,097	134	0	0	1,547	5	347
Refinery Total	4	0	4	0	23	0	0	23	316	1,097	134	0	0	1,547	5	347
Special Naphthas																1,926
Refinery	26	55	81	0	209	0	180	389	21	1,297	86	145	0	1,551	8	243
Bulk Terminal	—	—	762	—	—	0	—	273	—	0	0	—	—	25	0	44
Natural Gas Processing Plant	0	0	0	0	0	0	0	0	108	0	0	0	0	108	0	1,104
Total	—	—	843	—	—	—	—	662	—	—	—	—	—	1,684	8	287
Lubricants																3,484
Refinery	967	884	1,851	0	674	0	263	937	25	2,799	920	490	0	4,234	51	582
Bulk Terminal	—	—	1,062	—	—	—	—	—	1,044	—	—	—	—	229	2	644
Total	—	—	2,913	—	—	—	—	—	1,981	—	—	—	—	4,463	53	1,226
Waxes																10,636
Refinery	17	142	159	0	38	0	39	77	20	238	116	82	0	456	0	53
Total	—	—	159	—	—	—	—	77	—	—	—	—	—	456	0	53
Petroleum Coke																745
Refinery	1,092	0	1,092	0	539	42	86	667	0	400	946	163	0	1,509	133	2,149
Total	1,092	0	1,092	0	539	42	86	667	0	400	946	163	0	1,509	133	2,149
Asphalt and Road Oil																5,550
Refinery	1,769	42	1,811	260	1,760	884	382	3,286	425	559	1,456	595	122	3,157	264	1,456
Bulk Terminal	—	—	3,308	—	—	—	—	2,518	—	—	—	—	—	417	15	118
Total	—	—	5,119	—	—	—	—	5,804	—	—	—	—	—	3,574	279	1,574
Miscellaneous Products																16,350
Refinery	237	35	272	1	51	5	13	70	30	446	249	65	0	790	4	207
Bulk Terminal	—	—	61	—	—	—	—	—	39	—	—	—	—	28	0	38
Pipeline	—	—	0	0	0	1	0	—	104	—	—	—	—	208	0	166
Natural Gas Processing Plant	0	0	0	0	0	0	0	0	1	—	0	1	0	78	1	0
Total	—	—	333	—	—	—	—	—	214	—	—	—	—	1,104	5	245
Total Stocks, All Oils	—	—	224,750	—	—	—	—	—	268,031	—	—	—	—	818,905	28,261	171,931
																1,511,878

<sup>1</sup> Includes 33,379 thousand barrels of domestic crude oil.

Sources: See Explanatory Notes on Data Collection and Estimation.

— Not Applicable.

Table 21. Movements of Crude Oil and Petroleum Products by Pipeline, Tanker, and Barge Between PAD Districts, October 1983  
 (Thousands of Barrels)

Commodity	From I to					From II to					From III to					From IV to					From V to														
	II	III	V	I	III	IV	V	I	II	IV	V	II	III	V	I	II	III	V	I	II	III	V	I	II	III	V									
Crude Oil (Tanker and Barge only) ....	0	0	0	0	0	0	0	0	0	406	1,793	0	0	0	0	0	0	0	3,879	0	14,560	0	0	0	0	0									
Petroleum Products .....	8,450	152	0	3,969	5,543	2,361	347	85,757	29,665	0	1,270	1,753	585	517	0	0	0	0	0	0	6	0	0	0	0	0									
Natural Gasoline and Isopentane .....	0	0	0	0	128	0	0	0	0	334	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
Unfractionated Stream .....	0	0	0	0	512	0	0	0	0	1,243	0	0	582	585	0	0	0	0	0	0	0	0	0	0	0	0	0								
Plant Condensate .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
Liquefied Petroleum Gases .....	0	0	0	592	2,212	160	0	1,919	5,123	0	0	0	282	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
Unfinished Oils .....	21	0	0	0	0	0	0	288	253	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
Motor Gasoline Blending Components .....	0	0	0	0	0	0	0	0	0	1,091	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
Aviation Gasoline Blending Components .....	5,651	0	0	1,402	1,745	1,542	59	46,655	11,971	0	0	0	581	449	0	0	0	0	0	0	358	0	0	0	0	0	0	0	0						
Finished Motor Gasoline .....	3,051	0	0	502	985	865	0	18,004	5,890	0	324	279	0	289	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
Finished Leaded Motor Gasoline .....	2,600	0	0	900	760	677	59	28,651	6,081	0	257	170	0	69	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
Finished Unleaded Motor Gasoline .....	0	0	0	0	0	17	0	0	17	0	245	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
Finished Aviation Gasoline .....	121	0	0	0	65	0	0	434	57	0	88	87	0	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
Naphtha-Type Jet Fuel .....	402	0	0	183	103	409	0	9,782	1,603	0	90	6	0	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
Kerosene .....	38	0	0	0	0	0	0	845	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Distillate Fuel Oil .....	2,134	3	0	1,256	659	233	0	16,921	6,469	0	364	342	0	99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
Residual Fuel Oil .....	0	4	0	201	0	0	0	7,525	136	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Naphtha and Other Oils for Petro.																																			
Feedstock .....	27	0	0	31	0	0	0	0	21	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Special Naphthas .....	0	0	100	0	45	9	0	0	229	163	0	0	0	147	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Lubricants .....	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Waxes .....	0	0	0	87	0	0	0	0	232	688	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Asphalt and Road Oil .....	56	45	0	172	110	0	0	0	103	48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Total All Products .....	8,450	152	0	3,969	5,543	2,361	347	86,163	31,458	0	1,270	1,753	585	517	3,879	0	14,566	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Sources: See Explanatory Notes on Data Collection and Estimation.

**Table 22. Movements of Petroleum Products by Pipeline between PAD Districts, October 1983  
(Thousands Barrels)**

Commodity	From I to			From II to			From III to			From IV to			From V to		
	II	III	I	IV	V	VI	I	II	IV	V	VI	III	V	IV	
Natural Gasoline and Isopentane .....	0	0	0	128	0	0	334	0	0	5	0	0	0	0	0
Unfractionated Stream .....	0	0	0	512	0	0	1,243	0	0	582	585	0	0	0	0
Plant Condensate .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Liquefied Petroleum Gases .....	0	0	592	2,212	160	1,712	5,123	0	0	282	0	0	0	0	0
Motor Gasoline Blending Components .....	0	0	0	0	0	0	1,091	0	0	0	0	0	0	0	0
Aviation Gasoline Blending Components .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Finished Motor Gasoline .....	4,217	0	1,209	1,727	1,542	34,945	11,215	0	581	449	0	358	0	0	0
Finished Leadless Motor Gasoline .....	2,291	0	424	972	865	13,362	5,515	0	324	279	0	289	0	0	0
Finished Unleaded Motor Gasoline .....	1,926	0	785	755	677	21,583	5,700	0	257	170	0	69	0	0	0
Finished Aviation Gasoline .....	0	0	0	0	17	19	221	0	0	0	0	0	0	0	0
Naphtha-Type Jet Fuel .....	0	0	0	65	0	394	57	0	88	67	0	28	0	0	0
Kerosene-Type Jet Fuel .....	169	0	171	103	409	7,241	1,535	0	90	6	0	32	0	0	0
Kerosene .....	30	0	0	0	0	610	0	0	0	0	0	0	0	0	0
Distillate Fuel Oil .....	1,501	0	280	659	233	14,254	6,120	0	364	342	0	99	0	0	0
Residual Fuel Oil .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Miscellaneous Products .....	0	0	134	0	0	0	0	0	0	0	0	0	0	0	0
Total .....	5,917	0	2,386	5,406	2,361	59,175	25,939	0	1,123	1,753	585	517	0	0	0

Source: See Explanatory Notes on Data Collection and Estimation.

**Table 23. Movements of Crude Oil and Petroleum Products by Tanker and Barge Between PAD Districts, October 1983  
(Thousands Barrels)**

Commodity	From I to			From II to			From III to			From IV to			From V to		
	II	III	V	I	III	V	I	New Eng	Cent Atl	Low Atl	II	V	I	II	III
Crude Oil .....	0	0	0	0	0	0	406	0	406	0	1,793	0	3,879	0	14,560
Petroleum Products .....	2,533	152	0	1,583	137	347	26,582	1,138	3,104	22,340	2,726	147	0	0	6
Liquefied Petroleum Gases .....	0	0	0	0	0	0	207	0	0	207	0	0	0	0	0
Unfinished Oils .....	21	0	0	0	0	288	253	0	253	0	0	0	0	0	0
Motor Gasoline Blending Components .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Finished Motor Gasoline .....	1,434	0	0	193	18	59	11,710	0	1,002	10,708	756	0	0	0	0
Finished Aviation Gasoline .....	0	0	0	0	0	0	142	0	44	98	24	0	0	0	0
Naphtha-Type Jet Fuel .....	121	0	0	0	0	0	40	0	0	40	0	0	0	0	0
Kerosene-Type Jet Fuel .....	233	0	0	12	0	0	2,541	0	929	1,612	68	0	0	0	0
Kerosene .....	8	0	0	0	0	0	235	86	34	115	0	0	0	0	0
Distillate Fuel Oil .....	633	3	0	976	0	0	2,667	500	103	2,064	349	0	0	0	0
Residual Fuel Oil .....	0	4	0	201	0	0	7,525	504	69	6,952	136	0	0	0	0
Naphtha and Other Oils for Petro. Feed. Use .....	27	0	0	31	0	0	21	0	8	13	30	0	0	0	0
Special Naphthas .....	0	0	0	0	0	0	229	36	138	55	163	0	0	0	0
Lubricants .....	0	100	0	45	9	0	667	0	446	221	464	147	0	0	6
Waxes .....	0	0	0	0	0	0	10	0	10	0	0	0	0	0	0
Asphalt and Road Oil .....	0	0	0	87	0	0	232	0	15	217	685	0	0	0	0
Miscellaneous Products .....	56	45	0	38	110	0	103	12	53	38	48	0	0	0	0
<b>Total</b> .....	2,533	152	0	1,583	137	347	26,848	1,138	3,510	22,340	4,519	147	3,879	0	14,566

**Table 24. Net Movements of Crude Oil and Petroleum Products by Pipeline, Tanker and Barge Between PAD Districts, October 1983**  
 (Thousands of Barrels)

Commodity	PAD District I			PAD District II			PAD District III			PAD District IV			PAD District V		
	Receipts into PADD I	Shipments from PADD I	Net Receipts in PADD I	Receipts into PADD II	Shipments from PADD II	Net Receipts in PADD II	Receipts into PADD III	Shipments from PADD III	Net Receipts in PADD III	Receipts into PADD IV	Shipments from PADD IV	Net Receipts in PADD IV	Receipts into PADD V	Shipments from PADD V	Net Receipts in PADD V
Crude Oil (Tanker and Barge only) .....	4,285	0	4,285	1,793	0	1,793	14,560	2,199	12,361	0	0	0	0	18,439	-18,439
Petroleum Products .....	89,726	8,602	81,124	39,868	12,220	27,648	6,286	116,692	-110,406	2,361	2,855	-494	2,134	6	2,128
Natural Gasoline .....	0	0	0	339	128	211	128	334	-206	5	-5	0	0	0	0
Unfractionated Stream .....	0	0	0	1,825	512	1,313	1,097	1,243	-146	0	1,167	0	0	0	0
Plant Condensate .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Liquefied Petroleum Gases .....	2,511	0	2,511	5,405	2,964	2,441	2,212	7,042	-4,830	160	282	-122	0	0	0
Unfinished Oils .....	253	21	232	540	21	288	287	0	253	-253	0	0	0	286	268
Motor Gasoline Blending Components .....	0	0	0	1,091	0	1,091	0	1,091	-1,091	0	0	0	0	0	0
Aviation Gasoline Blending Components .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Finished Motor Gasoline .....	48,057	6,661	42,406	18,071	4,748	13,323	1,745	59,207	-57,462	1,542	807	735	998	0	998
Finished Leaded Motor Gasoline .....	18,506	3,051	15,455	9,220	2,352	6,888	985	24,218	-23,233	865	568	297	613	0	613
Finished Unleaded Motor Gasoline .....	29,551	2,600	26,951	8,951	2,396	6,455	760	34,989	-34,229	677	239	438	395	0	385
Finished Aviation Gasoline .....	161	0	161	245	17	228	0	406	-406	17	0	17	0	0	0
Naphtha-Type Jet Fuel .....	434	121	313	265	65	200	65	579	-514	0	115	-115	116	0	116
Kerosene-Type Jet Fuel .....	9,965	402	9,563	2,011	695	1,316	103	11,475	-11,372	409	38	371	122	0	122
Kerosene .....	845	38	807	38	0	38	0	845	-845	0	0	0	0	0	0
Distillate Fuel Oil .....	18,177	2,137	16,040	8,945	2,148	6,797	662	23,754	-23,092	233	441	-208	463	0	463
Residual Fuel Oil .....	7,726	4	7,722	136	201	-65	4	7,661	-7,657	0	0	0	0	0	0
Naphtha and Other Oils for Petro.															
Feedstock Use .....	52	27	25	57	31	26	0	51	-51	0	0	0	0	0	0
Special Naphthas .....	229	0	229	163	0	163	0	392	-392	0	0	0	0	0	0
Lubricants .....	712	100	612	464	54	410	115	1,278	-1,163	0	0	0	147	6	141
Waxes .....	10	0	10	0	0	0	0	10	-10	0	0	0	0	0	0
Asphalt and Road Oil .....	319	0	319	688	87	601	0	920	-920	0	0	0	0	0	0
Miscellaneous Products .....	275	101	174	104	282	-178	155	151	4	0	0	0	0	0	0
Total All Products .....	94,011	8,602	85,409	41,661	12,220	29,441	20,846	118,891	-98,045	2,361	2,855	-494	2,134	18,445	-16,311

Sources: See Explanatory Notes on Data Collection and Estimation.

**Table 25. Production of Residual Fuel Oil By Sulfur Content, October 1983  
(Thousand Barrels)**

Commodity	PAD District I		PAD District II			PAD District III			PAD District IV			PAD District V			United States Mt.		
	East Coast	Appala- chian #1	Total	Appala- chian #2	Ind., Ill., Ky.	Okl., Kans. Mo.	Total	Texas Inland	Texas Gulf Coast	L.a., Gulf Coast	No. La., Ark.	New Mexico	Total	PAD Dist. IV Rocky Mt.	PAD Dist. V West Coast		
Residual Fuel Oil	2,302	121	2,423	75	1,494	254	183	2,006	563	6,678	3,416	260	36	10,953	298	9,089	24,769
0.00 to 0.30% Sulfur	374	42	416	0	93	0	25	118	49	317	280	66	7	719	46	0	2,304
0.31 to 1.00% Sulfur	1,730	0	1,730	0	384	0	52	436	405	1,696	1,315	140	0	3,556	107	2,441	8,270
Greater Than 1.00% Sulfur	198	79	277	75	1,017	254	106	1,452	109	4,665	1,821	54	29	6,578	145	5,643	14,196

Source: See Explanatory Notes on Data Collection and Estimation.

**Table 26. Stocks of Residual Fuel Oil By Sulfur Content, October 1983  
(Thousand Barrels)**

Commodity	PAD District I		PAD District II			PAD District III			PAD District IV			PAD District V			United States Mt.		
	East Coast	Appala- chian #1	Total	Appala- chian #2	Ind., Ill., Ky.	Okl., Kans. Mo.	Total	Texas Inland	Texas Gulf Coast	L.a., Gulf Coast	No. La., Ark.	New Mexico	Total	PAD Dist. IV Rocky Mt.	PAD Dist. V West Coast		
Residual Fuel Oil - 0.00 to 0.30% Sulfur	415	37	452	0	158	0	21	179	35	99	144	21	3	302	136	548	1,617
Refinery	—	—	4,694	—	—	—	—	259	—	—	—	—	—	67	0	24	5,044
Bulk Terminal	—	—	5,146	—	—	—	—	438	—	—	—	—	—	369	136	572	6,661
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Residual Fuel Oil - 0.31 to 1.00% Sulfur	1,983	3	1,986	17	511	0	49	577	248	1,229	1,304	68	0	2,849	80	1,981	7,473
Refinery	—	—	6,855	—	—	—	—	714	—	—	—	—	—	2,984	0	665	11,218
Bulk Terminal	—	—	8,841	—	—	—	—	1,291	—	—	—	—	—	5,833	80	2,646	18,691
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Residual Fuel Oil - Greater than 1.00% Sulfur	821	62	883	2	1,036	198	33	1,269	96	3,230	1,593	61	28	5,008	236	3,651	11,047
Refinery	—	—	10,426	—	—	—	—	821	—	—	—	—	—	2,958	0	1,407	15,012
Bulk Terminal	—	—	11,309	—	—	—	—	2,090	—	—	—	—	—	7,366	236	5,058	26,059

Source: See Explanatory Notes on Data Collection and Estimation.  
— Not Applicable

**Table 27. Movements of Residual Fuel Oil by Tanker and Barge Between PAD Districts, By Sulfur Content, October 1983  
(Thousands Barrels)**

Commodity	From I to			From II to			From III to			From IV to			From V to		
	II	III	V	I	III	V	I	II	Low Atl	Cent Atl	II	V	I	II	III
Residual Fuel Oil	0	4	0	201	0	0	0	7,525	504	69	6,952	136	0	0	0
0.00 to 0.30% Sulfur	0	0	0	0	0	0	0	0	0	0	0	96	0	0	0
0.31 to 1.00% Sulfur	0	0	0	21	0	0	0	5,822	219	0	5,603	0	0	0	0
Greater Than 1.00% Sulfur	0	4	0	180	0	0	0	1,703	285	69	1,349	40	0	0	0

Source: See Explanatory Notes on Data Collection and Estimation.

**Table 28. Imports of Residual Fuel Oil by Sulfur Content by Country of Origin, October 1983  
(Thousand Barrels)**

Country	Residual Fuel Oil			
	0.00 to 0.30%	0.31 to 1.00%	Greater Than 1.00%	Total
<b>Arab OPEC</b>				
Algeria .....	775	312	0	1,088
Iraq .....	0	0	0	0
Kuwait .....	0	0	0	0
Libya .....	0	0	0	0
Qatar .....	0	0	0	0
Saudi Arabia .....	0	0	582	582
United Arab Emirates .....	0	0	0	0
Subtotal Arab OPEC .....	775	312	582	1,669
<b>Other OPEC</b>				
Ecuador .....	0	0	0	0
Gabon .....	0	0	0	0
Indonesia .....	434	127	0	561
Iran .....	0	0	0	0
Nigeria .....	19	0	0	19
Venezuela .....	111	232	1,563	1,906
Subtotal Other OPEC .....	564	359	1,563	2,486
<b>Other</b>				
Angola .....	0	318	0	318
Australia .....	0	0	0	0
Bahamas .....	544	44	1,065	1,652
Bolivia .....	0	0	0	0
Brazil .....	0	0	0	0
Brunei .....	0	0	0	0
Canada .....	247	278	198	723
Congo .....	0	174	0	174
Egypt .....	0	0	0	0
France .....	0	0	0	0
Ghana .....	0	0	0	0
Liberia .....	0	0	0	0
Malaysia .....	0	37	0	37
Mexico .....	(s)	0	987	987
Netherlands .....	341	0	0	341
Netherlands Antilles .....	0	258	3,290	3,548
Norway .....	0	0	0	0
Oman .....	0	0	0	0
People's Republic of China .....	0	0	0	0
Peru .....	0	0	237	237
Puerto Rico .....	0	0	0	0
Romania .....	0	0	0	0
Spain .....	0	0	0	0
Syria .....	0	0	0	0
Turkmenistan .....	0	0	313	313
Tunisia .....	0	0	0	0
United Kingdom .....	0	183	0	183
Virgin Islands .....	1,370	2,243	1,281	4,893
Yugoslavia .....	0	0	0	0
Zaire .....	0	0	0	0
Other Western Hemisphere .....	1,167	0	0	1,167
Other Eastern Hemisphere .....	314	492	130	936
Subtotal Other .....	3,984	4,026	7,480	15,490
<b>Total Imports .....</b>	<b>5,324</b>	<b>4,897</b>	<b>9,824</b>	<b>19,645</b>

(s) Less than 500 barrels.

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.

**Table 29. Imports of Residual Fuel Oil by Sulfur Content by State of Entry, October 1983**  
 (Thousands of Barrels)

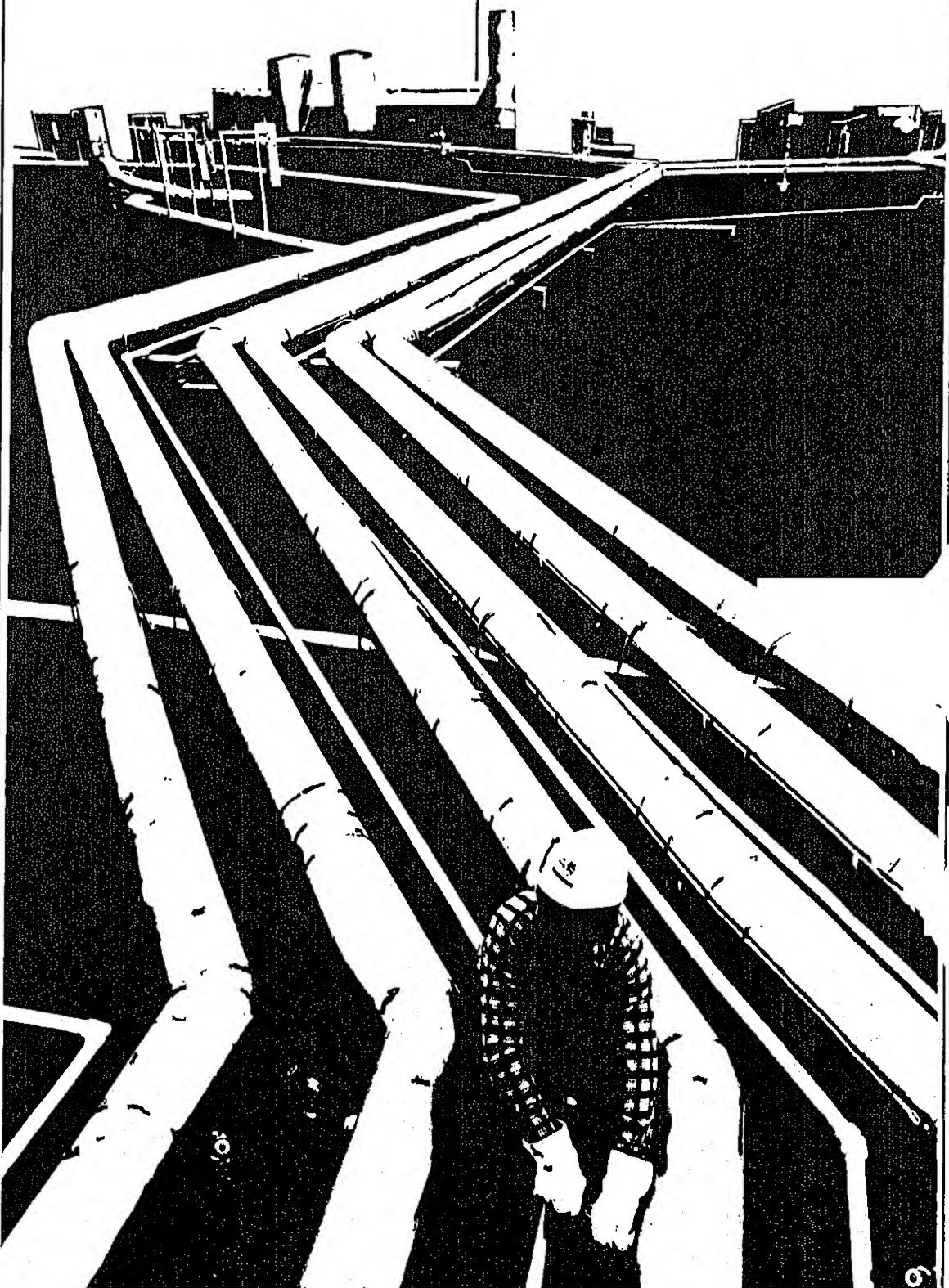
State	Residual Fuel Oil			Total
	0.00 to 0.30%	0.31 to 1.00%	Greater Than 1.00%	
<b>PAD District I</b>				
Connecticut .....	4,458	3,986	8,656	17,100
Delaware .....	264	0	0	264
Florida .....	0	0	127	127
Maine .....	(S)	345	650	995
Maryland .....	99	0	389	389
Massachusetts .....	106	100	319	518
New Jersey .....	481	0	1,451	1,557
New York .....	3,500	459	1,454	2,393
Pennsylvania .....	0	2,191	2,719	8,409
South Carolina .....	0	568	425	993
Vermont .....	0	0	338	338
Virginia .....	0	0	0	0
	324	784	1,108	
<b>PAD District II</b>				
Illinois .....	216	44	37	298
Michigan .....	0	44	0	44
Minnesota .....	168	0	0	168
North Dakota .....	0	0	3	3
Wisconsin .....	3	0	34	37
	44	0	0	44
<b>PAD District III</b>				
Texas .....	628	232	584	1,444
	628	292	584	1,444
<b>PAD District IV</b>				
Montana .....	21	0	18	39
	21	0	18	39
<b>PAD District V</b>				
California .....	(S)	435	329	765
Hawaii .....	0	0	199	199
	0	435	130	566
<b>All PAD Districts</b>	5,324	4,697	9,624	19,645

(S) Less than 500 barrels.

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.

# Glossary





# Definitions of Petroleum Products and Other Terms

**Alcohol.** The family name of a group of organic chemical compounds composed of carbon, hydrogen, and oxygen. The series of molecules vary in chain length and are composed of a hydrocarbon plus a hydroxyl group; CH<sub>n</sub>-CH<sub>n</sub>-OH. *Alcohol* includes methanol and ethanol.

**Aklylation.** A refinery process for chemically combining isoparaffin with olefin hydrocarbons. The product, alkylate, has high octane value and is blended with motor and aviation gasoline to improve the antiknock value of the fuel.

**API Gravity.** An arbitrary scale expressing the gravity or density of liquid petroleum products. The measuring scale is calibrated in terms of degrees API; it may be calculated in terms of the following formula:

$$\text{Deg API} = \frac{141.5}{\text{sp gr } 60\text{F}/60\text{F}} - 131.5$$

**Aromatics.** Hydrocarbons characterized by unsaturated ring structures of carbon atoms. Commercial petroleum aromatics are benzene, toluene, and xylene.

**Asphalt.** A dark-brown-to-black cement-like material, containing bitumens as the predominant constituents, obtained by petroleum processing. The definition includes crude asphalt as well as the following finished products: cements, fluxes, the asphalt content of emulsions (exclusive of water), and petroleum distillates blended with asphalt to make cutback asphalts. The conversion factor for asphalt is 5.5 barrels of 42 U.S. gallons per short ton.

**ASTM.** The acronym for the American Society for Testing and Materials.

**Aviation Gasoline Blending Components.** Finished components in the gasoline range which will be used for blending or compounding into finished aviation gasoline.

**Aviation Gasoline, Finished.** All special grades of gasoline for use in aviation reciprocating engines, as given in ASTM Specification D910 and Military Specification MIL-G-5572. Excludes blending components which will be used in blending or compounding into finished aviation gasoline.

**Barrel.** A volumetric unit of measure for crude oil and petroleum products equivalent to 42 U.S. gallons. This measure is used in most statistical reports. Factors for converting petroleum coke, asphalt and wax to barrels are given in the definitions for these products.

**Barrels per Calendar Day.** The maximum number of barrels of input that can be processed in a twenty-four hour period after making allowances for the following limitations: downstream limitations, environmental constraints, types and grades of inputs, planned and unplanned downtime, and types and grades of products.

**Barrels Per Stream Day.** The amount a unit can process running at full capacity under optimal crude and product slate conditions.

**Bi-metallic.** A term used to describe a type of catalyst. A catalytic process utilizing a catalyst comprised of two metals (e.g., platinum, rhodium).

**Butane.** A normally gaseous paraffinic hydrocarbon, C<sub>4</sub>H<sub>10</sub>. It is extracted from natural gas or refinery gas streams. Butane is covered by ASTM Specification D1835 and Gas Processors Association Specification for commercial butane.

**Isobutane.** A saturated straight-chain hydrocarbon of butane. It is a colorless paraffinic gas that boils at a temperature of 10.9 degrees F. This classification includes mixtures of gases that contain 80 percent liquid volume or more isobutane. It is extracted from natural gas and refinery gas streams.

**Normal Butane.** A saturated straight-chain hydrocarbon of butane. It is a colorless paraffinic gas that boils at a temperature of 31.1 degrees F. This classification includes mixtures of gases that contain 80 percent or more normal butane.

**Other Butanes.** All butanes not included as normal butane or isobutane.

**Butane-Propane Mixtures.** Mixtures consisting exclusively of butane and propane that conform to ASTM Specification D1835 and Gas Processors Association Specification for commercial butane-propane mixtures. They are extracted from natural gas and refinery gas streams.

**Butylene.** An olefinic hydrocarbon, C<sub>4</sub>H<sub>8</sub>, recovered from refinery processes.

**Catalytic Cracking.** The refining process of breaking down the larger, heavier, and more complex hydrocarbon molecules into simpler and lighter molecules. Catalytic cracking is accomplished by the use of a catalytic agent and is an effective process for increasing the yield of gasoline from crude oil.

**Catalytic Hydrocracking.** A refining process for converting middle boiling or residual material to high-octane gasoline, reformer charge stock, jet fuel and/or high grade fuel oil. Hydrocracking is an efficient, relatively low temperature process using hydrogen and a catalyst.

**Catalytic Hydrotreating.** A process for treating petroleum fractions (e.g., distillate fuel oil and residual fuel oil) and unfinished oils (e.g., naphthas, reformer feeds and heavy gas oil) in the presence of catalysts and substantial quantities of hydrogen to upgrade their quality.

**Catalytic Reforming.** The use of controlled heat and pressure with catalysts to effect the rearrangement of certain hydrocarbon molecules without altering their composition appreciably; the conversion of low-octane

gasoline fractions into higher octane stocks suitable for blending into finished gasoline; also the conversion of naphthas to obtain a more volatile product of higher octane number.

**Conventional.** A term used to describe a type of catalyst. A catalytic process utilizing a catalyst comprised of a metal and a non-metal (e.g., platinum, alumina).

**Coal.** A generic term applied to carbonaceous rocks that were formed by the partial or complete decomposition of vegetation. These stratified carbonaceous rocks are either solid or brittle and are highly combustible. Includes lignite, bituminous coal, and anthracite coal which conform to ASTM Specification D388.

**Crude Distillation.** The refining process of separating crude oil components by heating and subsequent condensing of the fractions by cooling.

**Crude Oil (including Lease Condensate).** A mixture of hydrocarbons that existed in liquid phase in underground reservoirs and remains liquid at atmospheric pressure after passing through surface separating facilities. Included are lease condensate and liquid hydrocarbons produced from tar sands, gilsonite and oil shale. Drip gas is also included, but topped crude oil (residual oil) and other unfinished oils are excluded. Liquids produced at natural gas processing plants and mixed with crude oil are likewise excluded where identifiable. Crude oil is considered as either domestic or foreign according to the following:

**Domestic.** Crude oil produced in the United States or from its outer continental shelf as defined in 43 U.S.C. 1331.

**Foreign.** Crude oil produced outside the United States.

**Delayed Coking.** A process to produce low Conradson carbon residue for catalytic cracking feedstock and for gasoline.

**Distillate Fuel Oil.** A general classification for one of the petroleum fractions produced in conventional distillation operations. It is used primarily for space heating, on-and-off-highway diesel engine fuel (including railroad engine fuel and fuel for agricultural machinery), and electric power generation. Included are products known as No. 1, No. 2, and No. 4 fuel oils; No. 1, No. 2, and No. 4 diesel fuel.

**No. 1 Fuel Oil.** A light distillate fuel oil intended for use in vaporizing pot-type burners. ASTM Specification D396 specifies for this grade maximum distillation temperatures of 420 degrees F. at the 10-percent point and 550 degrees F. at the 90-percent point, and kinematic viscosities between 1.4 and 2.2 centistokes at 100 degrees F.

**No. 2 Fuel Oil.** A distillate fuel oil for use in atomizing-type burners for domestic heating or for moderate capacity commercial-industrial burner units. ASTM

Specification D396 specifies for this grade distillation temperatures at the 90-percent point between 540 degrees and 640 degrees F., and kinematic viscosities between 2.0 and 3.6 centistokes at 100 degrees F.

**No. 1 and No. 2 Diesel Fuel Oils.** Distillate fuel oils used in compression-ignition engines, as given by ASTM Specification D975:

**No. 1-D.** A volatile distillate fuel oil with a boiling range between 300-575 degrees F. and used in high-speed diesel engines generally operated under wide variations in speed and load. Includes Type C-B diesel fuel used for city buses and similar operations. Properties are defined in ASTM Specification D975.

**No. 2-D.** A gas oil type distillate of lower volatility with distillation temperatures at the 90-percent point between 540-640 degrees F. for use in high-speed diesel engines generally operated under uniform speed and load conditions. Includes Type R-R diesel fuel used for railroad locomotive engines, and Type T-T for diesel-engine trucks. Properties are defined in ASTM Specification D975.

**No. 4 Fuel Oil.** A fuel oil for commercial burner installations not equipped with preheating facilities. It is used extensively in industrial plants. This grade is a blend of distillate fuel oil and residual fuel oil stocks that conforms to ASTM Specification D396 or Federal Specification VV-F-815C; its kinematic viscosity is between 5.8 and 26.4 centistokes at 100 degrees F. Also included is No. 4-D, a fuel oil for low- and medium-speed diesel engines that conforms to ASTM Specification D975.

**Eastern Hemisphere.** That half of the earth east of the Atlantic Ocean which includes Europe, Asia, Africa, and Australia. The Hawaiian Foreign Trade Zone is in this hemisphere.

**Electric Energy (Purchased).** Electricity purchased for refinery operations that is not produced within the refinery complex.

**Ethane.** A normally gaseous paraffinic compound ( $C_2H_6$ ) extracted from natural gas and refinery gas streams. "Ethane" includes any products containing 90 percent liquid volume or more ethane.

**Ethane-Propane Mixtures.** Mixtures of ethane and propane in which neither component is 90 percent or more of the liquid volume. It is extracted from natural gas and refinery gas streams.

**Ethylene.** An olefinic hydrocarbon, ( $C_2H_4$ ) recovered from refinery or petrochemical processes.

**Field Production.** Represents crude oil production on leases, natural gas liquids production at natural gas processing plants, and new supply of other hydrocarbons and alcohol.

**Fluid Coking.** A thermal process utilizing the fluidized-solids technique for continuous conversion of heavy, low-grade oils into lighter products.

**Gasoline Blending Components.** Finished components in the gasoline range which will be used for blending or compounding into finished aviation or motor gasoline.

**Gas Oil.** A liquid petroleum distillate having a viscosity intermediate between that of kerosene and lubricating oil. Derives its name from having originally been used in the manufacture of illuminating gas. Now supplies distillate-type fuel oils and diesel fuel, also cracked to produce gasoline.

**Imported Crude Oil Burned as Fuel.** The amount of foreign crude oil burned as a fuel oil, usually as residual fuel oil, without being processed as such. *Imported crude oil burned as fuel* includes lease condensate and liquid hydrocarbons produced from tar sand oil, gilsonite, and oil shale.

**Isomerization.** A refining process which alters the fundamental arrangement of atoms in the molecule. Used to convert normal butane into isobutane, an alkylation process feedstock, and normal pentane and hexane into isopentane and isoheptane, high-octane gasoline components.

**Kerosene.** A petroleum distillate that boils at a temperature between 300-550 degrees F., that has a flash point higher than 100 degrees F. by ASTM Method D56, that has a gravity range from 40-46 degrees API, and that has a burning point in the range of 150-175 degrees F. Included are the two classifications recognized by ASTM D-3699: No. 1-K and No. 2-K, and all grades of kerosene called range or stove oil which have properties similar to No. 1 fuel oil, but with a gravity of about 43 degrees API and a maximum end-point of 625 degrees F. Kerosene is used in space heaters, cook stoves, and water heaters and is suitable for use as an illuminant when burned in wick lamps.

**Kerosene-Type Jet Fuel.** A quality kerosene product with an average gravity of 40.7 degrees API, a 10 percent distillation temperature of 400 degrees F. It is covered by ASTM Specification D1655 and Military Specifications MIL-T-5624L (Grades JP-5 and JP-8). A relatively low-freezing point distillate of the kerosene type; it is used primarily for commercial turbojet and turboprop aircraft engines.

**Lease Condensate.** A natural gas liquid recovered from gas well gas (associated and non-associated) in lease separators or natural gas field facilities. Lease condensate consists primarily of pentanes and heavier hydrocarbons.

**Liquefied Petroleum Gases (LPG).** Propane, propylene, butanes, butylene, butane-propane mixtures, ethane-propane mixtures, and isobutane produced at refineries or natural gas processing plants, including plants that fractionate raw natural gas plant liquids.

**Liquefied Refinery Gases (LRG).** Liquefied petroleum gases fractionated from refinery or still gases. Through compression and/or refrigeration they are retained in the liquid state. The reported categories are ethane and/or ethylene, propane and/or propylene, butane and/or butylene, butane-propane mixtures, and isobutane. Excludes still gases used for chemical or rubber manufacture which are reported as a petrochemical feedstock and also excludes liquefied gases ready for blending into gasoline which are reported as gasoline blending components. Liquefied refinery gases are reported for use as petrochemical feedstocks or other uses.

**Lubricating Oils.** A substance used to reduce friction between bearing surfaces. Petroleum lubricants may be produced either from distillates or residues. Other substances may be added to impart or improve certain required properties. Lubricants includes all grades of lubricating oils from spindle oil to cylinder oil and those used in greases. The three categories include Bright Stock, Neutral, and Other.

**Bright Stock.** A refined, high viscosity lubricating oil base stock that is usually made from residuum by a treatment such as deasphalting, acid treatment, or solvent extraction.

**Neutral.** A distillate lubricating oil base stock with a viscosity that is usually not above 550 Saybolt Universal Seconds (SUS) at 100 degrees F. It is prepared by a treatment such as hydrofining, acid treatment, or solvent extraction.

**Other.** A lubricating oil base stock used in finished lubricating oils and greases, including black, coastal, and red oils.

**Middle Distillates.** A general classification that includes distillate fuel oil and kerosene.

**Miscellaneous Products.** Includes all finished products not classified elsewhere, e.g., petrolatum, absorption oils, ram-jet fuel, petroleum rocket fuels, synthetic natural gas feedstocks, specialty oils and medicinal oils.

**Motor Gasoline Blending Components.** Finished components in the gasoline range which will be used for blending or compounding into finished motor gasoline. Pool gasoline is included in this category.

**Motor Gasoline, Finished.** A complex mixture of relatively volatile hydrocarbons, with or without small quantities of additives, that have been blended to form a fuel suitable for use in spark-ignition engines. Specifications for motor gasoline, as given in ASTM Specification D439 or Federal Specification VV-G-1690B, include a boiling range of 122 degrees to 158 degrees F. at the 10-percent point to 365 degrees to 374 degrees F. at the 90-percent point and a Reid vapor pressure range from 9 to 15 psi. Motor gasoline includes finished leaded gasoline, finished unleaded gasoline, and gasohol. Blendstock is excluded until blending has been completed. Alcohol that is to be used in the blending of gasohol is also excluded.

**Finished Leaded Gasoline.** Contains more than 0.05 gram of lead per gallon or more than 0.005 gram of phosphorus per gallon. The actual lead content of any given gallon, however, may vary as a function of the size of the producer and company according to specific Environmental Protection Agency waiver provisions. Premium and regular grades are included, depending on the octane rating. Includes leaded gasohol. Blendstock is excluded until blending has been completed. Alcohol that is to be used in the blending of gasohol is also excluded.

**Finished Unleaded Gasoline.** Contains not more than 0.05 gram of lead per gallon and not more than 0.005 gram of phosphorus per gallon. Premium and regular grades are included, depending on the octane rating. Includes unleaded gasohol. Blend stock is excluded until blending has been completed. Alcohol that is to be used in the blending of gasohol is also excluded.

**Gasohol.** A blend of finished motor gasoline (leaded or unleaded) and alcohol (generally ethanol but sometimes methanol) in which 10 percent or more of the product is alcohol.

**Motor Gasoline, Total.** Includes finished leaded motor gasoline, finished unleaded motor gasoline, motor gasoline blending components, and gasohol.

**Naphtha-Type Jet Fuel.** A fuel in the heavy naphtha boiling range with an average gravity of 52.8 degrees API and 20 to 90 percent distillation temperatures of 290 degrees to 470 degrees F., meeting Military Specification MIL-T-5624L (Grade JP-4). JP-4 is used for turbojet and turboprop aircraft engines, primarily by the military. Excludes ram-jet and petroleum rocket fuels.

**Natural Gas.** A mixture of hydrocarbons and small quantities of various nonhydrocarbons existing in the gaseous phase or in solution with crude oil in underground reservoirs.

**Natural Gas Field Facility.** A field facility designed to process natural gas produced from more than one lease for the purpose of recovering condensate from a stream of natural gas; however, some field facilities are designed to recover propane, butane, natural gasoline, etc., and to control the quality of natural gas to be marketed.

**Natural Gas Plant Liquids.** Natural gas liquids recovered from natural gas in gas processing plants, and in some situations, from natural gas field facilities. Natural gas liquids extracted by fractionators are also included. These liquids are defined according to the published specifications of the Gas Processors Association and the American Society for Testing and Materials, and are classified as follows: Ethane, propane, ethane-propane mix, isobutane, butane, butane-propane mix, isopentane, natural gasoline, plant condensate, unfractionated stream, and other products from natural gas processing plants (i.e., products meeting the standards of finished petroleum products produced at natural gas processing plants, such as finished

motor gasoline, finished aviation gasoline, special naphthas, kerosene, distillate fuel oil, and miscellaneous products).

**Natural Gasoline and Isopentane.** A mixture of hydrocarbons, mostly pentanes and heavier, extracted from natural gas, that meets vapor pressure, end-point, and other specifications for natural gasoline set by the Gas Processors Association. Includes isopentane which is a saturated branch-chain hydrocarbon, C<sub>5</sub>H<sub>12</sub>, obtained by fractionation of natural gasoline or isomerization of normal pentane.

**OPEC.** The acronym for the Organization of Petroleum Exporting Countries, oil-producing and exporting countries that have organized for the purpose of negotiating with oil companies on matters of oil production, prices, and future concession rights. Current members are Algeria, Ecuador, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela.

**Operable Distillation Capacity.** The maximum amount of input that can be processed by a crude oil distillation unit in a 24-hour period, making allowances for processing limitations due to types and grades of inputs, limitations of downstream facilities, scheduled and unscheduled downtimes, and environmental constraints. Includes any shutdown capacity that could be placed in operation within 90 days.

**Other Hydrocarbons.** Materials received by a refinery and consumed as raw materials. Includes hydrogen, coal tar derivatives, gilsonite, and natural gas received by the refinery for reforming into hydrogen. Natural gas to be used as fuel is excluded.

**Petrochemical Feedstock Use.** Chemical feedstocks derived from petroleum, principally for the manufacture of chemicals, synthetic rubber, and a variety of plastics. The categories reported are Naphtha-less than 400 degrees F. end-point and Other oils-over 400 degrees F. end-point.

**Naphtha-Less Than 400 Degrees F. End-Point.** A naphtha with an end point of less than 400 degrees F. that is reported as used as a petrochemical feedstock.

**Other Oils-Over 400 Degrees F. End-Point.** Oils with an end point over 400 degrees F. that is reported as used as a petrochemical feedstock.

**Petroleum Coke.** A residue, the final product of the condensation process in cracking. This product is reported as marketable coke or catalyst coke. The conversion factor is five barrels of 42 U.S. gallons per short ton.

**Marketable Coke.** Those grades of coke produced in delayed or fluid cokers which may be recovered as relatively pure carbon. This green coke may be sold or further purified by calcining.

**Catalyst Coke.** In many catalytic operations (i.e., catalytic cracking) carbon is deposited on the catalyst, thus deactivating the catalyst. The catalyst is reactivated by burning off the carbon, which is used as a fuel in the refinery process. This carbon or coke is not recoverable in a concentrated form.

**Petroleum Products.** Petroleum products are obtained from the processing of crude oil (including lease condensate), natural gas, and other hydrocarbon compounds. Petroleum products include unfinished oils, natural gasoline and isopentane, plant condensate, unfractionated stream, liquefied petroleum gases; aviation gasoline, motor gasoline, naphtha-type jet fuel, kerosene-type jet fuel, kerosene, distillate fuel oil, residual fuel oil, naphtha less than 400° F. end-point, other oils-over 400° F. end-point, special naphthas, lubricants, waxes, petroleum coke, asphalt, road oil, still gas, and miscellaneous products.

**Petroleum Refinery.** An installation that manufactures finished petroleum products from crude oil, unfinished oils, natural gas liquids, other hydrocarbons, and alcohol.

**Plant Condensate.** One of the natural gas liquids, mostly pentanes and heavier hydrocarbons, recovered and separated as liquids at gas inlet separators or scrubbers in processing plants.

**Primary Stocks.** Stocks of crude oil or petroleum products held in storage at (or in) leases, refineries, natural gas processing plants, pipelines, tankfarms, and bulk terminals that can store at least 50,000 barrels of petroleum products or that can receive petroleum products by tanker, barge, or pipeline. Crude oil that is in transit from Alaska, or that is stored on Federal leases or in the Strategic Petroleum Reserve is included. Primary Stocks excludes stocks of foreign origin that are held in bonded warehouse storage.

**Propane.** A normally gaseous paraffinic compound, C<sub>3</sub>H<sub>8</sub>, which includes all products covered by NGPA Specification for commercial and HD-5 propane and ASTM Specification D1835. It is used primarily as a fuel and as a petrochemical feedstock.

**Propylene.** An olefinic hydrocarbon, C<sub>3</sub>H<sub>6</sub>, recovered from refinery or petrochemical processes.

**Residual Fuel Oil.** The topped crude of refinery operation which includes No. 5 and No. 6 fuel oils as defined in ASTM Specification D396 and Federal Specification VV-F-815C, Navy Special fuel oil as defined in Military Specification MIL-F-859E including Amendment 2 (NATO Symbol F-77), and Bunker C fuel oil. Residual fuel oil is used for the production of electric power, space heating, vessel bunkering, and various industrial purposes. Includes imported crude oil to be burned as a fuel.

**Road Oil.** Any heavy petroleum oil, including residual asphaltic oil used as a dust palliative and surface treatment on roads and highways. It is generally produced in

six grades from 0, the most liquid, to 5, the most viscous.

**Special Naphthas.** All finished products within the gasoline range that are used as paint thinners, cleaners, or solvents. These products are refined to a specified flash point and have a boiling range of 90 degrees to 220 degrees F. Special naphthas includes all commercial hexane and cleaning solvents conforming to ASTM Specifications D1836 and D484, respectively. Naphthas to be blended or marketed as motor gasoline or aviation gasoline or that are to be used as petrochemical and synthetic natural gas (SNG) feedstocks are excluded.

**Steam (Purchased).** Steam, purchased for use by a refinery, that was not generated from within the refinery complex.

**Still Gas (Refinery Gas).** Any form or mixture of gas produced in refineries by distillation cracking, reforming, and other processes. The principal constituents are methane, ethane, ethylene, butane, butylene, propane, propylene, etc. Still gas is reported for petrochemical feedstock use and/or refinery fuel use.

**Petrochemical Feedstock Use.** Includes all refinery streams which are used by chemical or rubber manufacturing operations for further processing, less the amount of such streams returned to the source refinery. Finished petrochemical products are not included. For example, polyethylene, butadiene, etc., are considered petrochemical products; therefore, only their feed-stock equivalents are included.

**Fuel Use.** All other still gas.

**Strategic Petroleum Reserve (SPR).** Stocks (currently, only crude oil) maintained by the Federal Government for use during periods of major supply interruption.

**Thermal Cracking.** A refining process in which heat and pressure are used to break down, rearrange, or combine hydrocarbon molecules. Thermal cracking is used to increase the yield of gasoline obtainable from crude oil.

**Unfinished Oils.** Includes all oils requiring further processing, except those requiring only mechanical blending.

**Unfractionated Streams.** Mixtures of unsegregated natural gas liquid components excluding those included in plant condensate. This product is extracted from natural gas.

**Vacuum Distillation.** Distillation under reduced pressure (less the atmospheric) which lowers the boiling temperature of the liquid being distilled. This technique, with its relatively low temperatures, prevents cracking or decomposition of the charge stock.

**Visbreaking.** A thermal cracking process in which heavy vacuum-still bottoms produced on the primary

distillation unit are cracked to increase production of distillate products.

**Wax.** A solid or semi-solid material derived from petroleum distillates or residues by such treatments as chilling, precipitating with a solvent, or de-oiling. It is light-colored, more-or-less translucent crystalline mass, slightly greasy to the touch, consisting of a mixture of solid hydrocarbons in which the paraffin series predominates. Includes all marketable wax whether crude scale or fully refined. The three grades included are microcrystalline, crystalline-fully refined, and crystalline-other. The conversion factor is 280 pounds per 42-gallon barrel.

**Microcrystalline Wax.** Wax extracted from certain petroleum residues having a finer and less apparent crystalline structure than paraffin wax and having the following physical characteristics:

Penetration at 77 degrees F. (D-1321)-60 maximum. Viscosity at 210 degrees F. in Saybolt Universal Sec-

onds (SUS) (D-88)-60 SUS (10.22 centistokes) minimum to 150 SUS (31.8 centistokes) maximum. Oil content (D-721)-5 percent minimum.

**Crystalline-Fully Refined Wax.** A light-colored paraffin wax having the following characteristics:

Viscosity at 210 degrees F. (D-88)-59.9 SUS (10.18 centistokes) maximum. Oil Content (D-721)-0.5 percent maximum. Other + 20 color, Saybolt minimum.

**Crystalline-Other Wax.** A paraffin wax having the following characteristics:

Viscosity at 210 degrees F. (D-88)-59.9 SUS (10.18 centistokes) maximum. Oil Content (D-721)-0.51 percent minimum to 15 percent maximum.

**Western Hemisphere.** That half of the earth that includes North and South America and the surrounding waters.

# Bureau of Mines Petroleum Refining Districts and PAD Districts

*The following are the Bureau of Mines petroleum refining districts which make up the PAD districts:*

## PAD District I

**East Coast:** District of Columbia and the States of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New Jersey, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida, and the following counties of the State of New York: Cayuga, Tompkins, Chemung and all counties east and north thereof. Also the following counties in the State of Pennsylvania: Bradford, Sullivan, Columbia, Montour, Northumberland, Dauphin, York, and all counties east thereof.

**Appalachian #1:** The State of West Virginia and those parts of the States of Pennsylvania and New York not included in the East Coast District.

## PAD District II

**Appalachian #2:** The following counties of the State of Ohio: Erie, Huron, Crawford, Marion, Delaware, Franklin, Pickaway, Ross, Pike, Scioto, and all counties east thereof.

**Indiana—Illinois—Kentucky:** The States of Indiana, Illinois, Kentucky, Tennessee, Michigan, and that part of the State of Ohio not included in the Appalachian District.

**Minnesota—Wisconsin—North and South Dakota:** The States of Minnesota, Wisconsin, North Dakota, and South Dakota.

**Oklahoma—Kansas—Missouri:** The States of Oklahoma, Kansas, Missouri, Nebraska, and Iowa.

## PAD District III

**Texas Inland:** The State of Texas except the Texas Gulf Coast District.

**Texas Gulf Coast:** The following counties of the State of Texas: Newton, Orange, Jefferson, Jasper, Tyler, Hardin, Liberty, Chambers, Polk, San Jacinto, Montgomery, Harris, Galveston, Waller; Fort Bend, Brazoria, Wharton, Matagorda, Jackson, Victoria, Calhoun, Refugio, Aransas, San Patricio, Nueces, Kleberg, Kenedy, Willacy, and Cameron.

**Louisiana Gulf Coast:** The following Parishes of the State of Louisiana: Vernon, Rapides, Avoyelles, Pointe Coupee, West Feliciana, East Feliciana, Saint Helena, Tangipahoa, Washington, and all Parishes south thereof. Also the following counties of the State of Mississippi: Pearl River, Stone, George, Hancock, Harrison, and Jackson. Also the following counties of the State of Alabama: Mobile and Baldwin.

**North Louisiana—Arkansas:** The State of Arkansas and those parts of the States of Louisiana, Mississippi, and Alabama not included in the Louisiana Gulf Coast District.

**New Mexico:** The State of New Mexico.

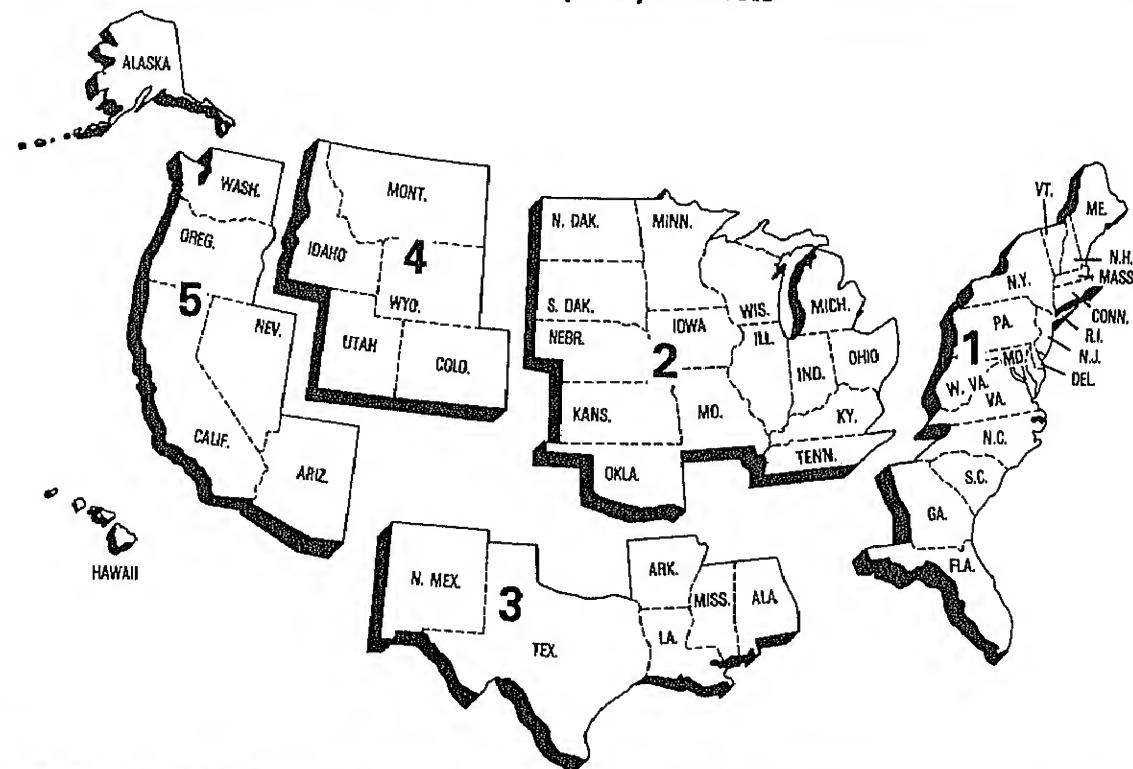
## PAD District IV

**Rocky Mountain:** The States of Montana, Idaho, Wyoming, Utah, and Colorado.

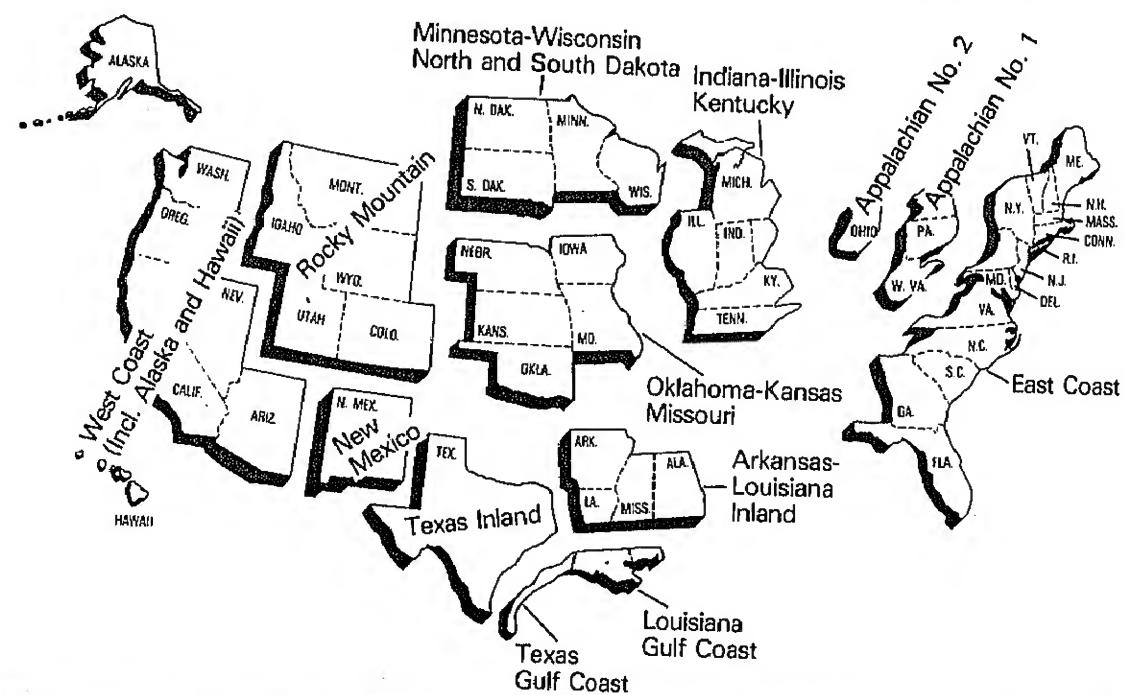
## PAD District V

**West Coast:** The States of Washington, Oregon, California, Nevada, Arizona, Alaska, and Hawaii.

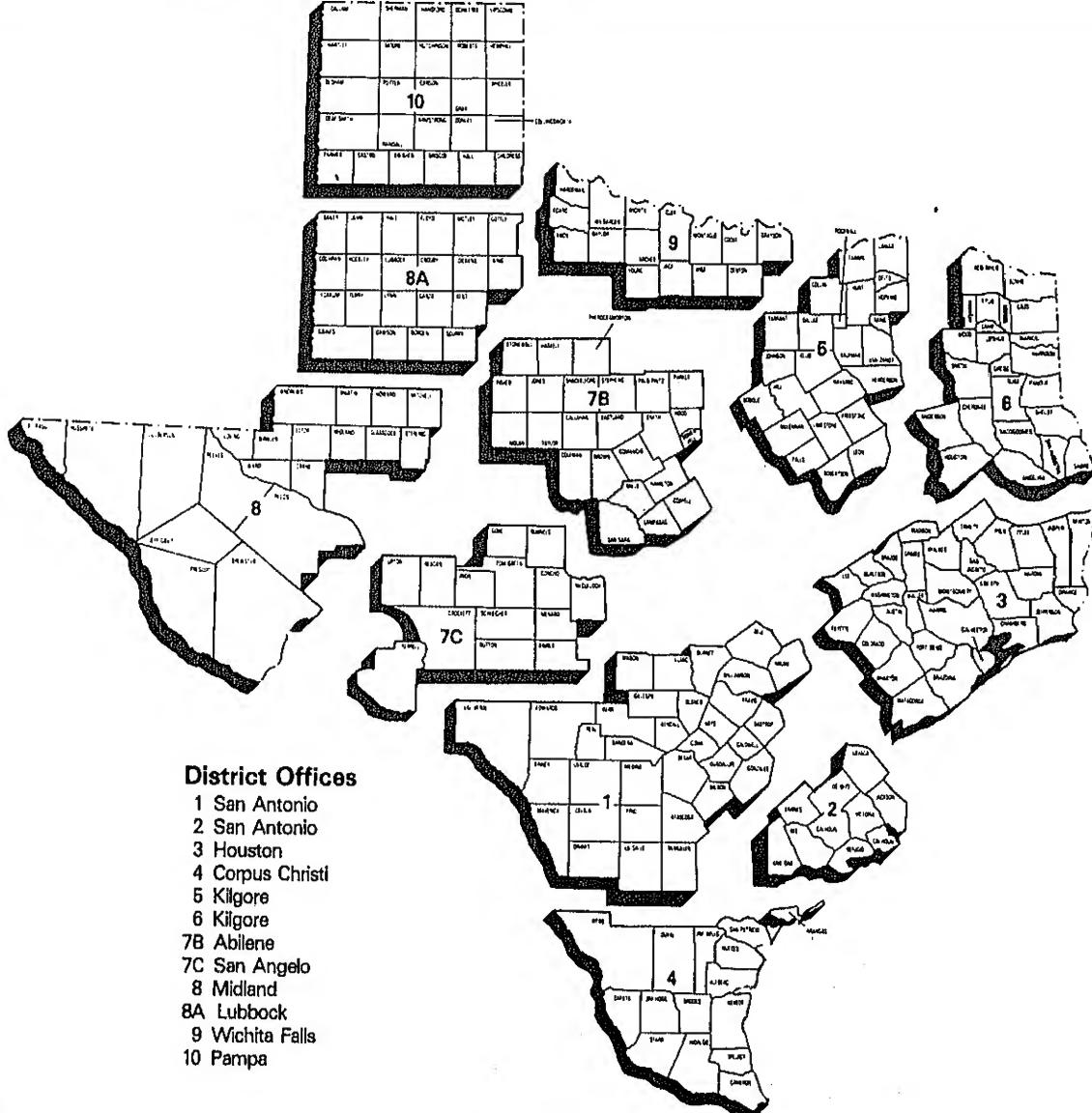
### Petroleum Administration for Defense (PAD) Districts



### Bureau of Mines Refining Districts

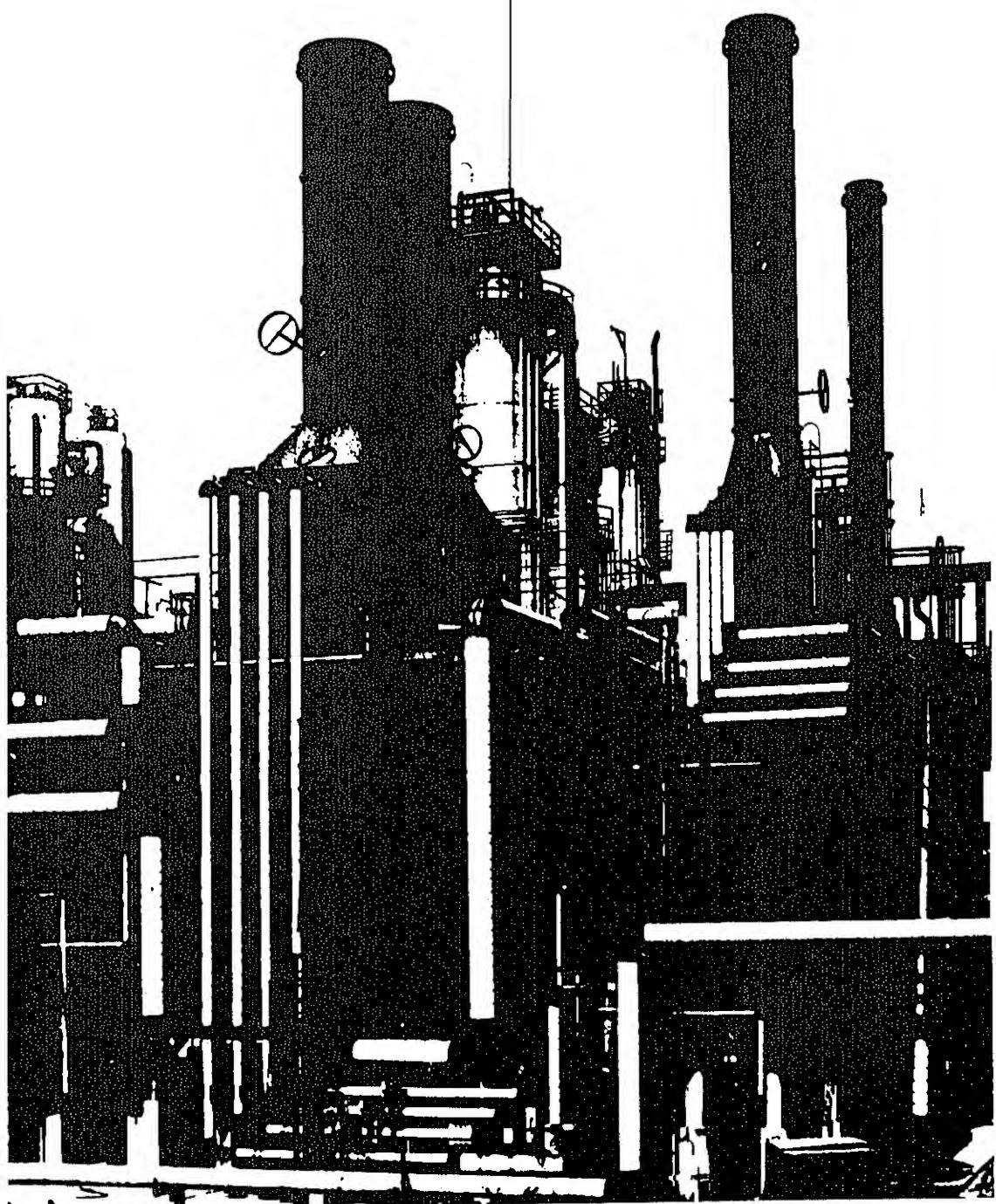


## District Map Oil and Gas Division Railroad Commission of Texas





# **Explanatory Notes**





## Note 1: Data Collection Methodology

### Background

Beginning in January 1983, the Energy Information Administration (EIA) unified its petroleum supply data collection activities into the Petroleum Supply Reporting System (PSRS). The PSRS represents a family of data collection survey forms, data processing systems and publication systems that have been consolidated to achieve comparability and consistency throughout. The primary focus of the consolidation has been to revise the weekly and monthly survey reporting forms to assure consistency in form layout, preparation instructions, and definitions. As a result, a new set of survey forms were implemented in January 1983. The following are the new form numbers and their corresponding predecessor forms:

New Form Number	Name	Old Form Number
EIA-800	Weekly Refinery Report	EIA-161
EIA-801	Weekly Bulk Terminal Report	EIA-162
EIA-802	Weekly Product Pipeline Report	EIA-163
EIA-803	Weekly Crude Oil Stocks Report	EIA-164
EIA-804	Weekly Imports Report	EIA-165
EIA-805	Weekly Shipments from Puerto Rico to the United States Report	—
EIA-810	Monthly Refinery Report	EIA-87
EIA-811	Monthly Bulk Terminal Report	EIA-88
EIA-812	Monthly Product Pipeline Report	EIA-89
EIA-813	Monthly Crude Oil Report	EIA-90
ERA-60	Monthly Imports Report	ERA-60
EIA-815	Monthly Shipments from Puerto Rico to the United States Report	FEA-P133-M-0
EIA-816	Monthly Natural Gas Liquids Report	EIA-64
EIA-817	Monthly Tanker and Barge Movement Report	EIA-170

Forms EIA-800 through 805 comprise the Weekly Petroleum Supply Reporting System (WPSRS). This system is designed to collect basic refinery operations and product stock data for major products on a weekly basis. Data from the WPSRS are published in the *Weekly Petroleum Status Report (WPSR)* and are also used to calculate the preliminary statistics in the "Summary Statistics" section of the *Petroleum Supply Monthly*

(PSM). A description of the WPSRS survey forms follows in Note 1.1.

Forms EIA-810-813, 815-817 and ERA-60 comprise the Monthly Petroleum Supply Reporting System (MPSRS). These surveys collect detailed refinery operations data, refinery, bulk terminal and pipeline stocks data, crude oil and petroleum product imports data and movements of petroleum products and crude oil between PAD Districts data. These surveys are the primary source of data for the "Summary Statistics" and "Detailed Statistics" sections of the PSM. A description of MPSRS survey forms follows in Note 1.2.

Data are also obtained in magnetic tape form from the Bureau of the Census on a monthly basis. These tapes contain aggregated import and export statistics that are used in the preparation of the PSM. A description of the Census data follows in Note 1.3.

### Note 1.1: Weekly Petroleum Supply Reporting System (WPSRS)

#### Background

The EIA first began publishing weekly petroleum supply statistics in April 1979 in response to the Iranian oil crisis. Initially, the published data were taken from the American Petroleum Institute (API) *Weekly Statistical Bulletin*. However, in January 1980 the EIA began to publish weekly statistics from its own surveys, with the exception of imports statistics which the EIA did not begin collecting until June 1980.

The weekly surveys collect data comparable to those collected on a monthly basis. Selected petroleum companies report weekly data to the EIA on crude oil and petroleum product stocks, refinery inputs and production, and crude oil and petroleum product imports. On Forms EIA-800 through EIA-803, companies report data on a custody basis. On the Form EIA-804, the importer of record reports each shipment entering the United States. On Form EIA-805, a company shipping unfinished oils and finished petroleum products into the United States from Puerto Rico reports each shipment. Current weekly data and the most recent monthly data are used to estimate the totals that are published in the *Weekly Petroleum Status Report*.

#### Sample Frame

The sample of companies that report weekly is selected from the universe of companies that report on the comparable monthly surveys. Sampled companies report data only for facilities in the 50 States and District of Columbia.

The sample for each survey is taken from the following universe:

**EIA-800:** Based on the EIA-810 universe, which includes all petroleum refineries in the United States and

its territories, industrial facilities that have crude oil distillation capacity and produce some refined petroleum products, and plants that produce finished motor gasoline through mechanical blending. The selected sample size is 215.

**EIA-801:** Based on the EIA-811 universe, which includes all bulk terminal facilities in the United States and its territories that have either a total bulk storage capacity of 50,000 barrels or more, or that receive petroleum products by tanker, barge, or pipeline. The selected sample size is 93.

**EIA-802:** Based on the EIA-812 universe, which includes all petroleum product pipeline companies in the United States and its territories that transport refined petroleum products, including Interstate, Intrastate and intracompany pipeline movements. Pipeline companies that transport only natural gas liquids are not included in the EIA-802 frame. Only those pipeline companies that transport products covered in the weekly survey are included. The selected sample size is 65.

**EIA-803:** Based on the EIA-813 universe, which consists of all companies which carry or store crude oil of 1,000 barrels or more in the 50 States, and the District of Columbia. Included are gathering and trunk pipeline companies (including Interstate, Intrastate, and intracompany pipelines), crude oil producers, terminal operators, storers of crude oil, and companies transporting Alaskan crude oil by water.

**EIA-804:** Based on the ERA-60 universe, which includes all importers of record of crude oil and petroleum products into the United States and Puerto Rico. The selected sample size is 65.

**EIA-805:** Based on the EIA-815 universe, which includes all shippers of unfinished oils and petroleum products into the United States from Puerto Rico. Four companies report.

### Sampling Method

The cut-off method is the sampling procedure used for all weekly surveys except the EIA-802, which uses the monthly universe in its entirety. In the cut-off method, companies are ranked from largest to smallest on the basis of the quantities reported during some previous 12-month period. Companies are chosen for the sampling, beginning with the largest and adding companies until the total sample covers 90 percent of the total for the previous time period for each product published in the *Weekly Petroleum Status Report*.

### Collection Methods

Data are collected by mail, mailgram, telephone, Telex, and Telefax on a weekly basis. The report period closes each Friday at 7 a.m. All canvassed firms and terminal operations companies must file by 5 p.m. on the following Monday.

### Estimation and Imputation

After company reports have been checked and entered into the weekly data base, weekly totals for given products are estimated by using the following formula.

The total reported by all companies for the most recent month ( $M_t$ ) is divided by the amount reported by the sample of companies for the most recent month ( $M_s$ ). The result is multiplied by the amount reported by the sample of companies for the current week ( $W_s$ ). The answer,  $W_t$ , is an estimate of the amount that would have been reported by all companies for the current week if all companies reported each week.

$$W_t = \frac{M_t}{M_s} (W_s)$$

This procedure is used to estimate total weekly inputs to refineries and production.

To estimate stocks of finished products, the preceding procedure is followed separately for refineries, bulk terminals, and pipelines. Total estimates are formed by summing over establishment types.

Weekly imports data are highly variable on a company-by-company basis or a week-by-week basis. Therefore, an exponentially smoothed ratio has been developed. The estimate of weekly imports is the sum of the smoothed ratio multiplied by the weekly values and estimates for shipments from Puerto Rico. Imports of other oils includes an adjustment from Census data for unlicensed products because of coverage differences between the monthly imports data and Census data.

Explicit imputation is done for companies which do not respond in a given week. The imputed values are exponentially smoothed means of recent reports from the specific company.

### Response Rates

The response rate for the published estimates is usually between 95 and 98 percent.

### Note 1.2: Monthly Petroleum Supply Reporting System (MPSRS)

#### Background

The MPSRS was implemented in January 1983 as the result of an extensive effort to integrate the collection and processing of petroleum supply data that have been collected on other survey forms for many years. The collection of monthly petroleum supply statistics began as early as 1918 when the Bureau of Mines (BOM) began collecting data on refinery operations and crude oil stocks and movements. The collection systems

were further expanded to include natural gas plant liquids production and storage in 1925, imports of crude oil and petroleum products and storage and movements of petroleum products in 1959, and tanker and barge movements of crude oil and petroleum products in 1964. Since their inception, each survey has undergone numerous changes, but the MPSRS is the first effort to make them all consistent and comparable.

### Respondent Frame

**EIA-810:** All petroleum refineries and plants that produce finished motor gasoline through the mechanical blending of liquids which are operated or controlled in the 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, the Hawaiian Foreign Trade Zone, and Guam. Approximately 313 respondents report on the EIA-810.

**EIA-811:** All bulk terminal facilities in the 50 States and the District of Columbia, Puerto Rico, and the Virgin Islands that (a) have a total bulk storage capacity of 50,000 barrels or more and/or (b) receive petroleum products by tanker, barge, or pipeline, regardless of ownership of the material. Approximately 328 respondents report on the EIA-811.

**EIA-812:** All products pipeline companies that carry petroleum products (including Interstate, Intrastate and intracompany pipelines) in the 50 States and the District of Columbia. Approximately 94 respondents report on the EIA-812.

**EIA-813:** All companies which carry or store crude oil of 1,000 barrels or more in the 50 States, and the District of Columbia. Included are gathering and trunk pipeline companies (including Interstate, Intrastate, and Intra-company pipelines), crude oil producers, terminal operators, storers of crude oil, and companies transporting Alaskan crude oil by water.

**EIA-815:** All licensed importers and importers of record shipping petroleum products from Puerto Rico into the 50 States and the District of Columbia.

Import data from the ERA-60 and EIA-815 are integrated into the import statistics reported in the PSM.

**EIA-816:** All operators of facilities designed to extract liquid hydrocarbons from natural gas stream (natural gas processing plants) or to separate a hydrocarbon stream into its component products, i.e., propane, butane, natural gasoline, etc. (fractionators). Approximately 990 respondents report on the EIA-816.

**EIA-817:** All known companies and plants that have custody of crude oil and petroleum products transported by tanker and barge between PAD Districts or between PAD Districts and the Panama Canal. There are about 50 respondents.

**ERA-60:** All licensed importers and importers of record importing crude oil and petroleum products into the

United States and Puerto Rico. The respondent universe consisted of approximately 1,100 firms as of July 31, 1982. However, only a selected 250 importers must report each month regardless of import activity. All others must report only for a month in which they actually had imports. The respondent universe for this survey is updated whenever an import license is granted by the Office of Oil Imports of the ERA.

EIA utilizes a number of sources and methods to maintain the survey respondent lists. On a regular basis, survey managers review industry publications such as the *Oil and Gas Journal* and *LP Gas Almanac* for information on facilities or companies going into operation or closing down. These are augmented by articles in newspapers, letters from respondents indicating changes in status and information received from survey systems operated by other offices.

Periodically an extensive survey study is conducted to completely refresh the frames. This involves consolidating information from every known source including state agencies, federal agencies (e.g., EPA, Corps of Engineers, Census Bureau, etc.), and private industry directories. The effort also includes the evaluation of the impact of potential frame changes on the historical time series of data published from these respondents. The results of this frame study are usually implemented in January to provide a full year under the same frame.

### Collection Methods

The data for all of the MPSRS surveys are collected monthly. Completed forms are required to be postmarked by the 20th day following the end of the report month, with the exception of the EIA-815 and ERA-60 which are due 15 work days following the end of the report month. Telephone follow-up calls are made to non-respondents prior to the publication deadline, for their data. An automated mailing list is maintained and is used to monitor receipt of the forms.

### Imputing Missing Data

Imputation is performed only for nonresponding companies that submitted reports the previous month. For such companies, previous monthly values are used for current values. The previous month's ending stocks value is used for both the current month's beginning stocks and the current month's ending stocks. In the event that the previous month's data were estimated, the respondent is contacted and requested to submit estimates, if necessary, to be followed by submission of actual data. Data for nonrespondents on the EIA-815 and 817, and ERA-60 are not imputed.

### Response Rates

As of the filing deadline, the response rates of the EIA-810 through EIA-813 respondents is over 90 per-

cent. The response rate for the EIA-816 is over 85 percent and for the EIA-817 it is 98 percent. All companies that have not responded are contacted by telephone. Although data are taken by telephone to expedite processing, a certified submission is still required. Names of companies that fail to file for 2 consecutive months are forwarded for further noncompliance action.

In July 1982, the ERA-60 survey had a response rate of 98 percent by the filing deadline. The universe was 1,100 firms at that time. (Because this is a dynamic survey, the universe is constantly changing.) Standard follow-up of nonrespondents is made to insure that all reports are received, since data are not imputed for nonrespondents. In addition, response is cross-checked with response on the Petroleum Licensing Decrementation System (PLDS), a listing of each month's importers. The response rate is generally 98 to 99 percent by the time the data are first published.

### Note 1.3: Census Import (IM-145) and Export (EM-522 and EM-594) Data

#### Background

Each month the EIA purchases magnetic tapes of aggregated import and export statistics from the Bureau of the Census. These data provide the only source of export statistics and are used to augment the import data collected by the EIA. Export statistics and import data from the Census tapes on liquefied petroleum gases, bonded ships bunkers and military offshore use are published in the PSM.

#### Import Statistics (IM-145)

##### Coverage

The import statistics reflect both government and non-government imports of merchandise from foreign countries into the U.S. Customs territory (the 50 States, the District of Columbia, and Puerto Rico), without regard to whether or not a commercial transaction is involved. In general, the statistics record the physical movement of merchandise into the United States from foreign countries, with the exception of the following types of transactions that are excluded from the statistics:

1. Merchandise in-transit through the United States, when documented with Customs as an in-transit movement.
2. Shipments from anywhere to U.S. possessions and shipments from U.S. possessions to the United States. (U.S. possessions include Puerto Rico, the Virgin Islands, Guam, and American Samoa.)
3. U.S. merchandise that was held in foreign countries by the U.S. Armed Forces and is returned to the United States for the use of the Armed Forces.

#### Source of Import Information

The official U.S. import statistics are compiled by the Bureau of the Census from copies of the import entry and warehouse withdrawal forms that importers are required by law to file with Customs officials (Customs Forms 7501, 7505, and 7506).

Imported petroleum is reported as *Imports for Consumption*. Imports for consumption are a combination of entries for immediate consumption and withdrawals from warehouses for consumption. With certain exceptions as indicated above, these data generally reflect the total of commodities entered into U.S. consumption channels.

#### Country and Area of Origin

The country reported in the statistics as the country of origin is defined as the country where the merchandise was grown, mined, or manufactured. In instances where the country of origin cannot be determined, the transactions are credited to the country of shipment.

#### Export Statistics (EM-522 and EM-594)

##### Coverage

The export statistics reflect both government and non-government exports of domestic and foreign merchandise from the U.S. Customs territory (the 50 States, the District of Columbia, and Puerto Rico) to foreign countries, without regard to whether or not the exportation involves a commercial transaction. In general, the statistics record the physical movement of merchandise out of the United States to foreign countries, with the exception of the following types of transactions:

1. All shipments from U.S. possessions, regardless of whether the shipments are sent to the United States, to other U.S. possessions, or to foreign countries.
2. Merchandise shipped in transit through the United States from one foreign country to another, when documented as such with U.S. Customs.
3. Bunker fuels and other supplies and equipment for use on departing vessels, planes, or other carriers engaged in foreign trade.

#### Source of Export Information

The official U.S. export statistics are compiled by the Bureau of the Census primarily from copies of Shipper's Export Declarations. Exporters are required to file Shipper's Export Declarations with Custom's officials. The only exceptions are those exporters who have been authorized to submit data directly to the Bureau of Census on magnetic tape, punched cards, or monthly Shipper's Summary Export Declarations.

## **Country and Area of Destination**

The country of destination is defined as the country of ultimate destination or the country where the goods are to be consumed, further processed, or manufactured, as known to the shipper at the time of exportation. If the shipper does not know the country of ultimate destination, the shipment is credited to the last country to which the shipper knows that the merchandise will be shipped in the same form as it was when exported.

## **Note 2: Supply**

The components of petroleum supply are field production, refinery production, imports, and stock withdrawal or addition:

**Field Production** is the sum of crude oil production (including lease condensate), natural gas processing plant production, and new supply (field production) of other liquids used by refineries.

Crude oil production is estimated based on data received from State conservation and revenue agencies. For further explanation, see Explanatory Note 3.

Field production of natural gas plant liquids (NGPL), including finished petroleum products, is reported monthly on survey Form EIA-816, *Monthly Natural Gas Liquids Report*. Negative production will occur when the amount of a product produced during the month is less than the amount of that same product that is reprocessed (input) or reclassified to become another product during the same month. For survey description and other detail, see Explanatory Note 1.2.

**Refinery Production** of LRGs, ethane, and finished petroleum products is reported monthly on survey Form EIA-810, *Monthly Refinery Report*. Published production of these products equals refinery production minus refinery input. Refinery production of unfinished oils and of motor and aviation gasoline blending components appears on a net basis under refinery input. Negative production will occur when the amount of a product produced during the month is less than the amount of that same product that is reprocessed (input) or reclassified to become another product during the same month. It should also be noted that refineries do not export production of crude oil, natural gasoline, isopentane, unfractionated stream, plant condensate, or other hydrocarbons.

**Imports** of crude oil and petroleum products are reported monthly on Form ERA-60, *Report of Oil Imports into the United States and Puerto Rico*, and Form EIA-815, *Shipments of Refined Products (Including Unfinished Oils) from Puerto Rico to the United States*. In addition, the Census Bureau Tabulation IM-145 summarizes import data from Customs import declarations reported on Customs Forms 7501 and 7505. The most prominent difference between the EIA and Census systems appears in imports of liquefied petroleum gases

(LPG), where the Census data show a much higher level of imports than EIA data. This occurs because the ERA-60 respondent frame was built by monitoring importers of licensed products and LPGs are not licensed products. Therefore, respondents that import only LPGs have not been identified, and do not report these imports to the Department of Energy. Since these importers are required to file form 7501 with the U.S. Customs Service, EIA obtains data on imports of LPGs from Census Tabulation IM-145. Additional data taken from the IM-145 are relatively small quantities of naphtha- and kerosene-type jet fuels, distillate fuel oils, and residual fuel oils withdrawn from bonded storage for use in international trade and for military offshore use. Even though these duty-free fuels are stored on United States shores, they did not enter the United States for domestic consumption and therefore are not included in the ERA-60 reporting system.

**Stock Withdrawal (+) or Addition (-)** is calculated by subtracting stocks at the end of the month from stocks at the beginning of the same month. (Note: The beginning stocks of one month are equal to the ending stocks of the previous month.) A positive result (+) would represent a withdrawal from stocks and an increase in petroleum supplies distributed for domestic consumption. A negative result (-) would represent a buildup of stocks and a reduction in the amount of petroleum supplies distributed for domestic consumption. For a description of survey forms used to make stock withdrawal or addition calculations see Explanatory Note 5.

**Unaccounted-for Crude Oil** is a balancing item that represents the difference between crude oil supply and disposition.

Crude oil supply is the sum of field production, imports and stock withdrawals or additions. Crude oil disposition is the sum of exports, refinery input, losses and product supplied. Unaccounted-for crude oil is calculated by subtracting crude oil supplies from crude oil disposition. A positive result indicates that refiners and exporters reported use of more crude oil than was reported to have been available to them. (This occurs, for example, when imports are undercounted due to late reporting or other problems.) A negative result would indicate that more crude oil was reported to have been supplied to refiners and exporters than they reported used.

## **Note 3: Domestic Crude Oil Production**

Data for the Crude Oil Production System (COPS) are reported to the Department of Energy by each of the State conservation agencies, which collect crude oil production values for tax purposes. The U.S. Geological Survey reports the volume of crude oil that is produced offshore in Federally-owned waters. With the exception of ten State conservation agencies, all of these reports are received monthly. After each calendar year, these monthly numbers are updated using the annual reports

from the State conservation agencies and the U.S. Geological Survey. The ten States that do not report monthly values are Indiana, Kentucky, Missouri, Arkansas, Utah, New York, Ohio, Pennsylvania, West Virginia, and Wyoming. Monthly values are estimated for these States using the individual linear trends of their historical annual crude oil production values.

There is a time lag of approximately 4 months between the end of the reporting month and the time when the monthly COPS information becomes available. Table 11 of this publication provides information on crude oil production for the most recent month for which COPS values are available. In order to present more timely crude oil production values, the EIA's Dallas Field Office prepares a series of State level estimates which are based on historical production patterns and are summed to obtain the monthly crude oil production values shown in the summary statistics of this publication.

The individual State level estimates are either exponential curve fitted projections based on recent data or are constant level projections based on the average production rate during a recent time period. In some cases, adjustments are made to these estimates based on additional information on expected changes in production rates supplied by a State agency, a trade association, or an individual field operator.

#### Note 4: Disposition

The components of petroleum disposition are crude oil losses, refinery inputs, exports, and products supplied for domestic consumption.

**Crude Oil Losses** is the sum of crude oil losses at refineries. Crude oil losses at refineries are reported on Form EIA-810, *Refinery Report*.

**Refinery Inputs** of crude oil, natural gas plant liquids, and other liquids are reported monthly on survey Form EIA-810, *Monthly Refinery Report*. Published inputs of unfinished oils and of motor and aviation gasoline blending components equal refinery input minus refinery output. Refinery inputs of finished petroleum products are reported on a net basis under refinery production.

**Exports** of crude oil and petroleum products are compiled from Census Bureau tabulations EM-522 and EM-594. Exports include crude oil shipments to Puerto Rico, the Virgin Islands, and the Hawaiian Foreign Trade Zone, which are obtained from refinery receipts reported on Form EIA-810, by refineries located in these places.

**Product supplied** for each product is calculated by summing field production plus refinery production, plus imports, plus stock withdrawal or minus stock addition, minus crude oil losses (plus net receipts when calculated on a PAD District basis), minus re-

finery input, minus exports. This formula ensures that total disposition equals total supply.

**Products supplied** indicates those quantities of petroleum products supplied for domestic consumption. Occasionally, the result for a product is negative because total disposition of that product exceeds total supply. Negative product supplied may occur for a number of reasons: (1) product reclassification has not been reported, (2) data were misreported or reported late, (3) in the case of calculations on a PAD District basis, the figure for net receipts was inaccurate because the coverage of interdistrict movements was incomplete.

Product supplied for crude oil is the sum of crude oil burned on leases and by pipelines as fuel oil. These data are reported on EIA-813, *Monthly Crude Oil Report*. Prior to January 1983, crude oil burned on leases and by pipelines as fuel oil were reported as either distillate or residual fuel oil and included in product supplied for these products.

#### Note 5: Stocks

Primary stocks of crude oil are the sum of ending stocks reported monthly on Form EIA-810, *Monthly Refinery Report*, and on Form EIA-813, *Monthly Crude Oil Report*. Crude oil held in the Strategic Petroleum Reserve is included unless otherwise noted. Alaskan crude oil in transit is also included. Stocks of crude oil are also reported weekly on Form EIA-800, *Weekly Refinery Report*, and on Form EIA-803, *Weekly Crude Oil Stocks Report*. Primary stocks of petroleum products are summed from data reported on Form EIA-816, *Monthly Natural Gas Liquids Report*, Form EIA-811, *Monthly Bulk Terminal Report*, and on Form EIA-812, *Monthly Product Pipeline Report*. Primary stocks of petroleum products do not include either secondary stocks held by dealers and jobbers or stocks held by consumers. Petroleum product stocks are also reported weekly on Form EIA-800, *Weekly Refinery Report*, Form EIA-801, *Weekly Bulk Terminal Report*, and Form EIA-802, *Weekly Crude Oil Stocks Report*. For survey descriptions and other details, see Explanatory Notes 1.1 - 1.3.

#### Note 6: Average Stock Levels

The graphs displaying monthly stock levels of crude oil, motor gasoline, distillate fuel oil, residual fuel oil, liquefied petroleum gases, and other products provide the user with recent data as well as a summary of data from January through December or from July through June for the most recent 3-year period. This summary takes the form of an *average range* that includes seasonal variation determined from a longer time period. The

average range represents the historical pattern; it is not a forecast.

These curves are updated semiannually (on April 1 and October 1), by basing the *average ranges* on a more recent time period. Each 3-year data series is adjusted by dropping the first 6 months and including the most recent 6 months.

For each data series, the monthly seasonal factors are estimated by means of a seasonal adjustment technique developed at the Bureau of the Census (Census X-11). The seasonal factors are assumed to be stable (i.e., unchanging from year to year) and additive. The series is deseasonalized by subtracting the seasonal factor for the appropriate month from the reported stock levels. The intent of deseasonalization is to remove only seasonal variation from the data. Thus, a deseasonalized series would contain the same trends and irregularities as the original data. For crude oil stocks, the derived seasonal factors are very small relative to crude oil stock levels. Therefore, the seasonal factors for distillate fuel oil, residual fuel oil, liquefied petroleum gases and other products are derived using monthly data from 1974-1980. For motor gasoline, the seasonal factors are based on monthly data from 1975, 1976, 1978, 1979 and 1980. In 1977, there was virtually no seasonal behavior in motor gasoline stocks. Monthly stock levels stayed at the same high level for the entire year. In addition, the seasonal patterns in 1973, 1974 and 1977 were not representative of the recent past, and these years were not used in the determination of seasonal patterns for motor gasoline stocks. Because of these differences in the year-to-year seasonal fluctuation of motor gasoline, the evidence for the illustrated seasonal patterns for crude oil, distillate fuel oil, residual fuel oil, liquefied petroleum gases and other products is stronger than is the evidence for the illustrated seasonal patterns for motor gasoline.

In some cases, these seasonal patterns do not show a smooth transition from month to month. For example, the June factor for residual fuel oil is slightly less than the May and July values, making a bump in the curve. As there is little difference in the magnitude of these seasonal factors, it is possible that this variation is due to the small number of observations (7 years) and the data variability.

After seasonal factors are derived, the most recent 3-year period (from January through December or from July through June) is deseasonalized. The average of the deseasonalized 36-month series determines the midpoint of the deseasonalized average band. The standard error of the deseasonalized 36 months is calculated adjusting for extreme data points. The width of the *average range* is twice this standard error.

The upper curve of the *average range* is defined as the average plus the seasonal factors plus the standard error. The lower curve is defined as the average plus the seasonal factors minus the standard error.

## Note 7: Movements

Movements of crude oil between PAD Districts are reported on Form EIA-817, *Monthly Tanker and Barge Movement Report*, and on Form EIA-813, *Monthly Crude Oil Report*. Petroleum product movements are reported on Forms EIA-817 and EIA-812, *Monthly Product Pipeline Report*. Net receipts is the difference between total movements into and total movements out of each PAD District by pipeline, tanker, and barge. For survey descriptions and other detail, see Explanatory Note 1.2.

## Note 8: Preliminary Monthly Statistics

Weekly data (Forms EIA-800, 801, 802, 803, and 804) are used to estimate the most recent monthly values for the *Summary Statistics* section. Since some of the weekly reporting periods overlap two adjacent months, it is necessary to use weighting factors in the calculation of the monthly values.

To estimate crude oil and petroleum product imports, crude oil input to refineries and production of petroleum products for a specific month, the weekly estimates are weighted by the number of days of that month included in each week, then summed.

End-of-month stock levels of crude oil and the major products (motor gasoline, distillate fuel oil, and residual fuel oil) are calculated in a similar manner, but use only the two weekly reporting periods that cover the end-of-week stocks before and after the end of the month. The end-of-month stock level is calculated by first calculating the stock change between the two weeks. The daily stock change between the two end-of-week stock levels is then calculated. This number is multiplied by the weighting factor of the earlier of the two weeks (the week that covers the last day of the month of interest). This change is added to the earlier of the two end-of-week stock levels to estimate the end-of-month stock level.

Preliminary monthly estimates of domestic crude oil production are calculated as described in Explanatory Note 3.

## Note 9: Notes on Tables

**Note 9.1 Crude Oil and Petroleum Products Overview**  
statistics on the referenced line appear in Table 4 of the Detailed Statistics, except where noted.

- Crude Oil and Petroleum Products Stock Withdrawal (+) or Addition (-), Petroleum Products Supplied, Total Imports, Crude Oil Imports, Total Exports, and Crude Oil Exports appear as labeled in Table 4. Total Production and Crude Oil Production appear under Field Production in Table 4.

- Natural Gas Plant Production is the sum of Natural Gas Liquids and Finished Petroleum Products Field Production in Table 4.

- Petroleum Products Imports is the sum of Natural Gas Liquids and LRGs, Other Liquids, and Finished Petroleum Products Imports in Table 4.

- Total Crude Oil and Petroleum Products Ending Stocks appear in thousands of barrels in Table 2.

**Note 9.2 Crude Oil Supply and Disposition** statistics on the referenced line appear in Table 1 of the Detailed Statistics, except where noted.

- Total Domestic Field Production, Alaskan Field Production, SPR Imports, Other Imports (synonymous with Imports Gross Excl. SPR), SPR and Other Primary Stocks Withdrawal (+) or Addition (-), Unaccounted For Crude Oil, Refinery Inputs, and Exports appear as labeled in Table 1.

- Crude losses and Product Supplied appear as labeled in Table 4.

- SPR Ending Stocks and Other Primary Ending Stocks (synonymous with stocks excluding SPR) appear in thousands of barrels in Table 1.

- Total Crude Oil Ending Stocks appear in thousands of barrels in Table 2.

- Total Imports appear in Table 4.

**Note 9.3 Finished Motor Gasoline Supply and Disposition** statistics on the referenced line appear in Table 4 of the Detailed Statistics, except where noted.

- Total Production is the sum of Field Production and Refinery Production in Table 4.

- Imports, Stock Withdrawal (+) or Addition (-), Exports, and Product Supplied appear as labeled in Table 4.

- Unleaded Percent of Total Product Supplied represents the ratio of finished unleaded motor gasoline product supplied to total finished motor gasoline product supplied, multiplied by 100 and rounded to the nearest tenth.

- Ending Stocks appear in thousands of barrels in Table 2.

**Note 9.4 Distillate and Residual Fuel Oil Supply and Disposition** statistics on the referenced lines appear in Table 4 of the Detailed Statistics, except where noted.

- Total Production is the sum of Field Production and Refinery Production in Table 4.

- Imports, Stock Withdrawal (+) or Addition (-), Exports, and Product Supplied appear as labeled in Table 4.

- Ending Stocks appear in thousands of barrels in Table 2.

**Note 9.5 Liquefied Petroleum Gases Supply and Disposition** statistics represent the aggregation of statistics on ethane, propane, butane, butane-propane mixtures, ethane-propane mixtures, and Isobutane. The statistics on the referenced line appear in Table 4 of the Detailed Statistics, except where noted.

- Total Production is the sum of Field Production and Refinery Production in Table 4.

- Imports, Stocks Withdrawal (+) or Addition (-), Refinery Inputs, Exports, and Product Supplied appear as labeled in Table 4.

- Ending stocks appear in thousands of barrels in Table 2.

**Note 9.6 Other Petroleum Products Supply and Disposition** statistics represent the aggregation of statistics on natural gasoline, isopentane, unfractionated stream, plant condensate, other liquids, and all finished petroleum products except finished motor gasoline, distillate fuel oil, and residual fuel oil. The statistics on the referenced line are aggregated from Table 4 of the Detailed Statistics, except where noted.

- Total Production is the aggregated sum of Field Production and Refinery Production in Table 4.

- Imports, Stock Withdrawal (+) or Addition (-), Refinery Inputs, Exports, and Product Supplied are aggregated from Table 4.

- Ending stocks are aggregated from ending stocks in thousands of barrels in Table 2.

#### **Note 9.7 Table 1. U.S. Petroleum Balance**

- Lines (1) through (3): Crude oil (including lease condensate) production for Alaska, Lower 48 States, and Total U.S. are calculated by calling the conservation agency in Alaska for Alaskan crude oil production during the month, estimating crude oil production in the United States (see Explanatory Note 3), and taking the difference to equal production in the Lower 48 States.

- Line (5): SPR Imports are reported on Survey Form ERA-60.

- Line (12): Total Other Sources equals crude oil stock withdrawal (+) or addition (-) plus unaccounted for crude oil minus crude losses in Table 2.

- Line (14): Natural gas plant liquids (NGPL) Production equals field production of natural gas liquids (NGL) plus field production of finished petroleum products in Table 2.

- Line (15): NGPL Imports equals the sum of the im-

ports of natural gasoline and Isopentane, unfractionated stream, and plant condensate imports in Table 2.

- Line (16): *NGPL Stock Withdrawal (+) or Addition (-)* is equal to the sum of stock withdrawal (+) or addition (-) of natural gasoline and Isopentane, unfractionated stream, and plant condensate in Table 2.
- Line (17) equals the sum of lines (14), (15), and (16).
- Line (18): Unfinished oils and gasoline blending components *Stock Withdrawal (+) or Addition (-)* equals stock withdrawal (+) or addition (-) for other hydrocarbons and alcohol, for unfinished oils, motor gasoline blending components, and aviation gasoline blending components.
- Line (20): *Other Hydrocarbons and Alcohol New Supply* equals the field production of same in Table 2.
- Line (21): *Refinery Processing Gain* is a balancing item equal to total refinery production minus total refinery input in Table 2.
- Line (23): *Total Other Liquids* equals the sum of lines (18) through (22).
- Line (24): *Total Production of Products* equals crude oil input to refineries plus field production of NGPL and finished petroleum products; plus imports of natural gasoline and Isopentane, unfractionated stream, and plant condensate; plus stock withdrawal (+) or addition (-) of natural gasoline and Isopentane, unfractionated stream, and plant condensate; plus stock withdrawal (+) or addition (-) of other hydrocarbons and alcohol, unfinished oils, aviation gasoline blending components, and motor gasoline blending components; plus imports of unfinished oils, aviation gasoline blending components, and motor gasoline blending components; plus field production of other hydrocarbons and alcohol; plus total refinery production; minus total refinery input; plus crude oil product supplied in Table 2.
- Line (25): *Gross Imports of Refined Products* equals imports of LPG plus imports of finished petroleum products in Table 2.
- Line (26): *Exports of Refined Products* equals exports of LPG plus exports of finished petroleum products in Table 2.
- Line (27): *Net Imports of Refined Products* equals the difference between lines (25) and (26).

- Line (28): *Total New Supply of Products* equals crude oil input to refineries plus field production of NGPL and finished petroleum products; plus imports of natural gasoline and Isopentane, unfractionated stream, and plant condensate; plus stock withdrawal (+) or addition (-) of natural gasoline and Isopentane, unfractionated stream, and plant condensate; plus stock withdrawal (+) or addition (-) of other hydrocarbons and alcohol, unfinished oils, aviation gasoline blending components, and motor gasoline blending components; plus imports of unfinished oils, aviation gasoline blending components, and motor gasoline blending components; plus field production of other hydrocarbons and alcohol; plus total refinery production; minus total refinery input; minus crude oil product supplied plus imports of LPG and finished petroleum products; minus exports of LPG and finished petroleum products in Table 2.
- Line (29): *Refined Products Stocks Withdrawal (+) or Addition (-)* equals the sum of stock withdrawal (+) or addition (-) for LPG and finished petroleum products in Table 2.
- Line (30): *Total Petroleum Products Supplied for Domestic Use* equals total products supplied in Table 2.
- Lines (31) through (35) equal the respective products supplied in Table 2.
- Line (36): *Other Products Supplied* equals the sum of natural gasoline and Isopentane, unfractionated stream, plant condensate, aviation gasoline, naphtha < 400 Deg. F for petrochemical feedstock use, other oils > 400 Deg. F. for petrochemical feedstock use, special naphthas, lubricants, waxes, coke, asphalt, road oil, still gas, unfinished oils, motor gasoline blending components, aviation gasoline blending components and miscellaneous products supplied in Table 2.
- Line (37): *Total Product Supplied* is equal to total products supplied in Table 2.
- The sum of lines (38) and (39), stocks of *Crude Oil and Lease Condensate (Excluding SPR)* and stocks held by the *Strategic Petroleum Reserve*, equals ending stocks of crude oil in Table 2. SPR stocks are reported on Form EIA-813.
- Line (43): stocks of *Refined Products*, equals the sum of LPG and finished petroleum product stocks in Table 2.



